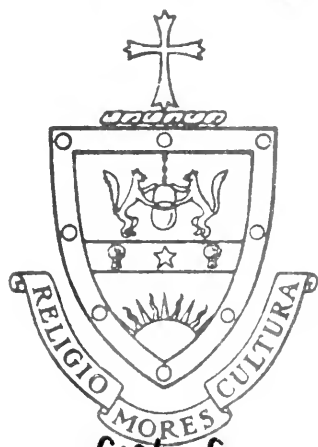
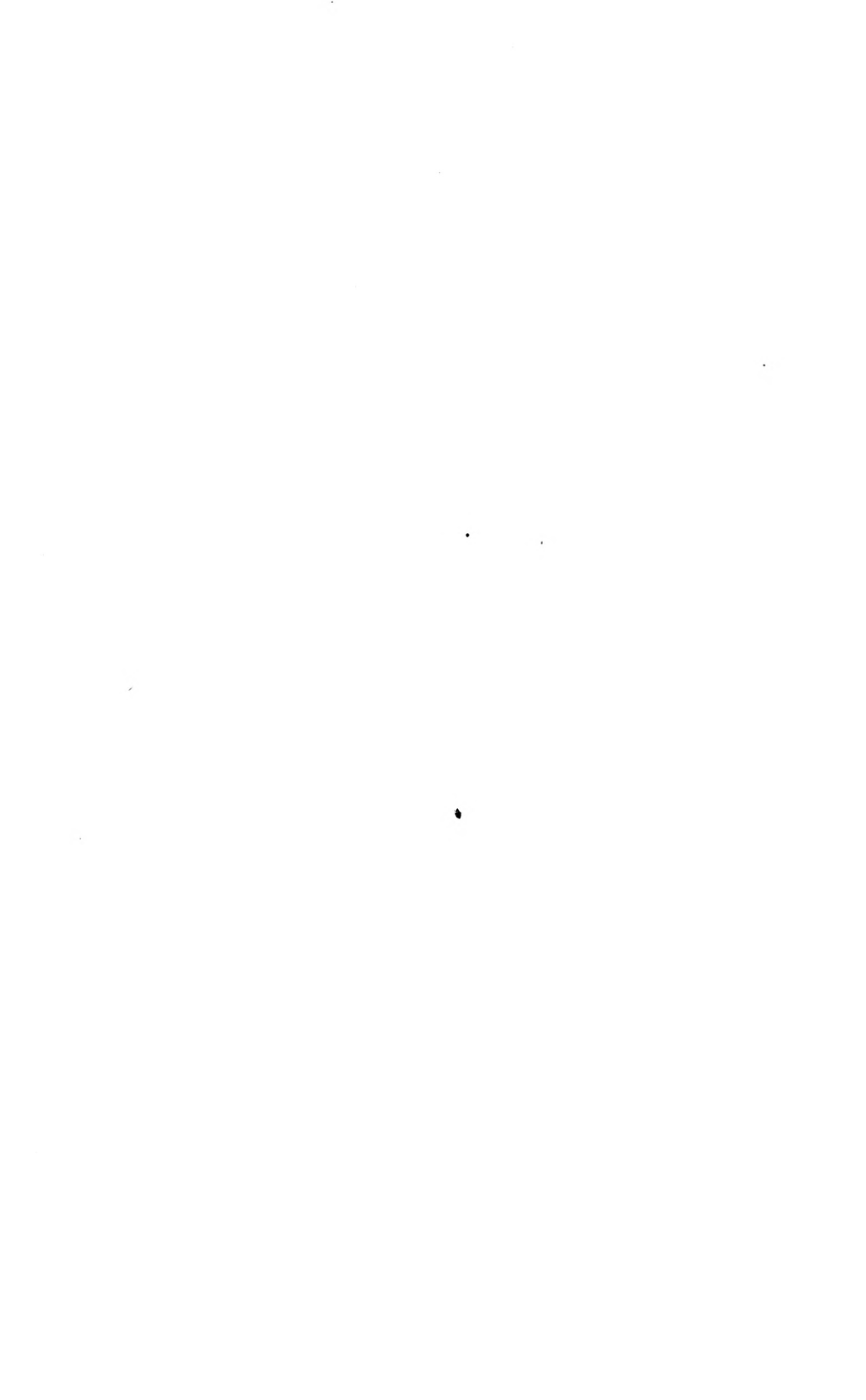


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Commonwealth of Pennsylvania

REPORT

OF THE

Department of Mines

OF PENNSYLVANIA

PART I---Anthracite

1915

HARRISBURG, PA.:
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1916



LETTER OF TRANSMITTAL

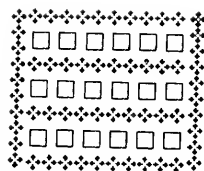
Department of Mines,
April 1, 1916.

To His Excellency, Martin G. Brumbaugh, Governor of Pennsylvania.

Sir: In compliance with the Act of Assembly of April 14, 1903, I beg to submit herewith, for transmission to the General Assembly, the report of the Department of Mines for the year ending December 31, 1915. Part I covers in detail the operations in the twenty-one Anthracite Districts, Part II the operations in the thirty Bituminous Districts, as returned by the Inspectors. Observations and suggestions are also offered relative to mining subjects.

Respectfully submitted,

JAMES E. RODERICK,
Chief of Department of Mines.



REPORT

OF THE

DEPARTMENT OF MINES

INTRODUCTION

The total production of coal in Pennsylvania in 1915 amounted to 246,797,774 net tons. The number of accidents was 3,340, of which 1,030 were fatal and 2,310 non-fatal. The anthracite region produced 89,377,706 net tons of coal, as against 91,189,641 tons in 1914. The bituminous region produced 157,420,068 net tons of coal, as against 145,884,530 tons in 1914, and 22,012,949 net tons of coke, as against 17,164,124 tons in 1914.

The year opened with most unfavorable conditions, but towards the middle of the summer the bituminous trade began to feel the effect of the foreign orders for war munitions that called into activity nearly all available plants in the eastern part of the country. Any concern that was able to manufacture powder, shell, guns or other supplies needed by the foreign countries, was placed in operation and work was pushed with feverish activity. The demand for bituminous coal to supply the needs of the plants engaged in this newly developed trade became so urgent that part of the output was diverted from its usual channels, and, as a result, the anthracite trade was benefited by the demand that arose for the smaller sizes of coal. As the year progressed, the industry became still more active and the year terminated with both regions producing very heavily and with prices at abnormal figures.

Higher prices for coal are expected during the year 1916. They are at least hoped for most ardently by most of the bituminous operators who feel that an advance of from five to twenty-five cents a ton is absolutely necessary to keep them from loss. The two principal arguments for a higher price are, that all other articles consumed or used in any way by the public have advanced in price, and the further reason that the profits on bituminous coal have hitherto been entirely too small. The existence of some of the operators, when the selling price is very little greater than the cost of production, is very precarious and it is the general opinion that a higher price must be received for the production or some of the less firmly entrenched and less favorably situated operators will be compelled to relinquish

the business. Another element that enters into this question is the steady advance in the cost of production, due to the deeper mines, the longer hauls and the higher cost of labor, all elements that affect materially the total cost of producing coal.

The introduction and enforcement of the Compensation Act of 1915 will no doubt place an additional burden on the coal operators. The reporting of accidents to the State authorities with the utmost dispatch after their occurrence will in some instances be somewhat difficult and expensive, and the fact that the insurance rates are to be based on the risks of the individual mines, instead of being made equal throughout the State, will make necessary the installation of expensive safety devices by most of the smaller operators to bring their mines up to the standard maintained by the larger operators.

Labor troubles of the year were of a minor character and confidence is expressed for a continuance of peaceful operation, although the renewal of the wage scale in both regions April 1 may prove an occasion for disturbance. The bituminous miners are having a prosperous period at present and they are generally anxious to continue without a break in their earning power. In the anthracite region conditions are more uncertain and more apprehension exists as to the future.

WORKMEN'S COMPENSATION

Compensation for industrial accidents is not by any means a new idea. The desire to assist those who are injured or those who may be left dependent has made itself felt in numerous attempts at compensation in years gone by. In fact, the controlling principle of the trade guilds that existed during the middle centuries was the principle that underlies the compensation movement of today. While the idea is old, the first governmental administration of any of the so-called helpful measures was inaugurated in Germany only about sixty years ago. In that country they now have an employers' liability law and also compulsory sick and accident benefits. It was not, however, until the twentieth century that compensation legislation reached a position of importance in the world at large.

Compensation legislation may very appropriately be classed among the highest of governmental attainments. It is the evidence of a fine humanitarian spirit, a spirit fortunately that is daily awakening to greater activity and urging to greater accomplishment; and while the present laws on this subject in this country are tentative in form and necessarily somewhat crude and defective, they nevertheless mark an important step in the direction of ultimate protection to the working classes. The Commonwealth of Pennsylvania by the enactment of the Compensation Law of 1915 has taken its place among the most advanced and progressive States of the Union in this beneficent form of legislation, and to Governor Brumbaugh much credit is due for his consistent and staunch advocacy of the measure.

In this connection it is worthy of note that no State that has adopted compensation has ever relinquished it to go back to the unfair and uncertain common law basis of liability.

The Department of Mines views with pleasure the progress in compensation legislation, as it is in keeping with the frequent suggestions made in the annual reports of the department as to the necessity for giving protection to the workers of the State, particularly the mine employes, the first suggestion having been made in 1882 by the present Chief of the Department who was then a State Mine Inspector in the anthracite region. The recent suggestions by the Department have been along the line of placing a tax on the coal production. A tax of two and one-half cents a ton on the annual output, approximating 250,000,000 tons, would yield \$6,250,000 revenue, or \$120,000 a week, a sum undoubtedly adequate for the purpose.

Under the Act of 1915, the entire mining community will enjoy a protection never known before, and the assistance will come to the miners and their families without the necessity of appeal to the employer or resort to the courts. It can never, of course, be pleasing to contemplate injury from accident, but there will be nevertheless a sense of comfort to both the miner and to his family in the thought that in case of a calamity, perhaps unavoidable or inevitable, the burden will be somewhat lightened by a certain and definite recompense. In times of distress such as follow all severe accidents, the assurance of even a comparatively small fund for sustenance will be most grateful.

Pennsylvania has been fortunate in having a large and efficient State inspection force whose duty it has been to insist upon the enforcement of the provisions of the laws that relate to safety conditions in the mines. It has also been fortunate in the large number of operators who have shown a remarkable degree of consideration for their employes, not only by installing in the mines practically every modern safety device and adopting the most comprehensive rules of safety, but by their humanitarian efforts in the way of aiding in the establishment of relief funds for those who are injured or those who may be left dependent. No doubt, however, the additional obligations that will be placed upon the operators by reason of the enforcement of the compensation law will act as a spur to still further efforts in the way of improving the conditions of safety, which will or ought to reduce the accidents during 1916. The certainty that every serious accident will require the outlay of a definite sum of money will be a strong incentive to go to extremes in the way of protective measures. Just what further precautions they can take is a matter of conjecture as most of them have already more than complied with the requirements of the law in this respect. There will, however, undoubtedly be a more rigid enforcement of the mine rules, and the individual worker will have emphasized to him the necessity for constant attention to the ever-present dangers that surround his occupation.

The compensation act will therefore have the double virtue of tending to prevent accidents and of caring for the employes who are so unfortunate as to suffer from them.

FOREIGN TRADE

At the beginning of the year lively hopes were entertained for an increase in the export trade of coal, but the year closed with less volume of export business than the preceding year. An encourag-

ing phase, however, was the beginning of a certain trade with the competitive markets of the world that may develop in future to large dimensions. In some respects the progress towards the conquest of foreign trade was remarkable. Several of the great coal companies have established foreign sales offices and agents, and are acquiring ships to carry their coal. Some of them already have docks. Practically all of the companies have been obtaining credit information and in other ways preparing to enter upon foreign trade.

Many of those who hope for a market for Pennsylvania coals other than the home market, realize that there are two ways of disposing of their product. One is to ship the coal as raw material. The other is to use it in manufacturing articles that can be sold abroad. Of the two ways, the latter is deemed by some authorities to be the wiser to follow for the reason that having united with the cost of labor the cost of coal in the production of certain articles, there will be a greater effort to sell them. More than this, the matter of transportation is a very serious one, as the ship space is extremely valuable, and the same amount of space allotted to the finished product would bring much greater returns than if allotted to the low priced raw material. Every thought on this question leads to the conclusion that it is to the interest of Pennsylvania to export coal in the form of manufactured products rather than as a raw material. Owing to our tremendous production, however, the necessity constantly exists for disposing of the coal in the quickest possible way and for that reason the operators are inclined to resort to coal shipments rather than wait for a profit to come from the sale of manufactured articles.

BY-PRODUCTS AND DYES

About one-third of the coke tonnage of the United States is produced by the by-product ovens; the other two-thirds, or perhaps 30,000,000 tons, are produced by the old beehive ovens that not only produce less coke but waste entirely the by-products—benzol, gas, tar, ammonia, et cetera.

The benzol products are particularly valuable at this time as they are largely used in making dyes, and as the supply of dyes from Germany has been cut off by reason of the war, these products have acquired almost fictitious values. In response to the urgent demand for them, there has come into existence a number of inefficient plants, which, in spite of their inefficiency, are making a great deal of money in producing benzol; and at some of the by-product plants the coke is being stocked, the by-products only being utilized.

The conditions that existed shortly after the war began gave rise to the belief that the United States was about to launch largely into the manufacture of dye stuffs, owing to the tremendous field opened up for such articles. It seemed like an easy thing for the wide-awake American to grasp this unexpected opportunity. It meant much money and at first blush seemed very plausible. The results thus far, however, have not been very encouraging, and while the ability to produce by-products, including the numerous and very desirable dyes now made in Germany, would help to relieve the coal and coke situation, success in this direction cannot be expected for many years. It is practically a new field of endeavor for the American and one that requires patience, ability and long years of effort to bring satisfactory results.

CERTIFIED MINE FOREMEN AND FIRE BOSSES

What would seem like a step backward in mining legislation, was the amendment made by the legislature of 1915 to the laws relating to the examination of mine foremen and fire bosses in both the anthracite and bituminous regions, by which these officials were exempted from examination.

Ever since the passage of the act of 1885 the operators have been obliged to confine their selection of mine foremen and fire bosses to the men who held certificates of qualification from the Department of Mines, received after examination by the State boards, but they may now employ whom they please, with the restriction, however, that the men employed must possess equal qualifications with the men who hold certificates.

This legislative action was taken to bring the great army of miners under the provisions of the new compensation law. The opinion prevailed that they could not legally participate in the benefits of the law while under the supervision of mine foremen and fire bosses who were classed as State agents and were practically representatives of the State, although employed and paid by the operators.

The Department of Mines has always believed in the greatest degree of efficiency in these important officials and has strenuously advocated a practical and thorough test of their qualifications by a rigid examination by a State board, realizing that upon these men depend in no small degree the safe operation of the mines and the consequent protection of the employes. However, as it was only a matter of fairness that the miners as well as those dependent upon them should share in the benefits of the new legislation, the operators are made free, as stated, to employ men who are without any specific or official certificate of qualification or character from the State.

The Department, notwithstanding the change in the law, will continue to hold examinations as usual, and it is most gratifying to know that the number of applicants in 1916 will in all probability be as large as in other years. There are two reasons for this condition. First, the operators must have mine foremen and fire bosses who are qualified for the positions, and the possession of a certificate from the State is accepted as sufficient evidence of qualification. Second, the mine foremen and fire bosses themselves seem anxious to have their ability and fitness attested to by the State examining boards.

The desire of the operators for competent employes, as well as the expressed desire of the employes to demonstrate their fitness by examination, gives assurance of continued careful and efficient operation of the numerous mines of the State.

HISTORICAL REVIEW OF THE USE OF ELECTRICITY IN THE MINING AND PREPARATION OF ANTHRACITE COAL IN THE STATE OF PENNSYLVANIA*

The first use of electric power in the mining of anthracite coal is of such recent origin that it is within the memory of most men engaged in the industry.

* Paper prepared by a Committee of Electrical Engineers (H. M. Warren, Chairman) of the Engineers' Society of North Eastern Pennsylvania and read at a meeting of the Society June 13, 1914.

Overcoming the skepticism and to a large extent, antagonism, electricity has, within the last 27 years, with rapid strides, advanced from a minor position to one of the greatest importance.

Because of the low first cost and familiarity with the uses of steam and compressed air, the adoption of electricity was greatly retarded. The use, however, of steam and compressed air, necessitated long lines of steam and air piping, which were expensive in first cost and maintenance. Since the electric power eliminates many of the objections of these systems and affords a more flexible medium of transmitting energy, it is easily understood why it has made such rapid progress. Today, all power driven equipment required for the production and preparation of anthracite coal, can be operated electrically.

The most important factor influencing the general adoption of electric power was the electric mining locomotive.

The first electrical installation was made in 1887 by The Pennsylvania Railroad Company at its Lykens Valley Colliery. This consisted of an electric generator and a straight haulage mine locomotive. No description of the generating plant has been obtained, except it is known that it was designed and installed by the Union Electric Company.

In 1889 the Thompson-Houston Company installed a locomotive in the Erie Colliery of the Hillside Coal and Iron Company of Mayfield. A generating station was also installed. It is interesting to note that this locomotive was in service until 1911 or a period of 22 years of continuous service.

In 1891 the Hillside Coal and Iron Company installed at its Forest City operation, a generating plant and two 12-ton "Terrapin Back" locomotives.

In 1893 at the Mt. Lookout Colliery, Wyoming, a generating station and a 6-ton locomotive were installed.

In 1894 the D. L. & W. R. R. Company installed at their Bellevue Colliery, a generating station and a 10-ton locomotive.

In 1894 the New York and Scranton Coal Company installed at Ontario Colliery, Peckville, a generating station and a 7-ton locomotive.

In 1895 at the Johnson Mines, Green Ridge, later called the Green Ridge Coal Company, there were installed a generating station and a 6½-ton locomotive.

The first electric pump installed was at the Hillside Coal and Iron Company's Forest City operation, in 1890, and it has been in continuous operation ever since.

Soon after, the second electrically driven pump was installed at the William A. Colliery of the Connell Coal Company, at Duryea, Pa.

The third electrically driven pump was installed at the Mt. Lookout Colliery in 1893. This pump was recently moved to the Lackawanna Colliery of the Temple Iron Company and is still in operation.

The next electrically operated pump was installed in April, 1894, at the Ontario mine of the Scranton Coal Company. This was still in operation a few months ago, which is practically nineteen years' service.

In 1896 the first electrically operated hoist was installed at the Lehigh Valley Coal Company's Maltby Colliery, West Wyoming, Pa.

GENERATING STATIONS

Very little is known of the generating installation at Lykens Valley, but the next installation was made by the Hillside Coal and Iron Company at Mayfield, Pa., in 1899 and consisted of a 30-KW 220 volt D. C. 1150 RPM, class III, Thompson Houston generator, belt-driven by a 10"x16" Armington and Sims simple, slide-valve center-crank engine. This equipment furnished the power for operating an electric locomotive in the Erie mines.

In 1891, the Hillside Coal and Iron Company installed at its Forest City operation, one D-62 (85 HP.) 220-volt D. C., 900 RPM generator, belt-driven by a 15"x16" Armington and Sims simple, slide-valve, center-crank engine.

Since that time, plant after plant has been installed by the mining companies and a gradual evolution has taken place. The modest power plant consisting of a single engine of the simplest type and of less than 50 indicated horsepower, belted to an electric generator and with a switchboard frame made of wood, has evolved into the modern mining central station containing 4,000 K. W. turbine driven units, with a total station capacity of 10,500 K. W's.

The prime movers are directly coupled to generators and are supplied with steam at 150 to 200 pounds pressure and superheated 150 degs. F. Instead of exhausting into the atmosphere as in the earlier days, the prime mover of the up-to-date generating plant exhausts into condensers operating under high vacuum.

In the place of the wood frame switchboard, we now find marble or slate switchboards consisting of 25 to 30 panels, and equipped with the most modern type of instruments for measuring and recording the energy and having its switch gear remotely located and controlled by small switches on the switchboard panels.

The evolution has been gradual but constant. The small belted reciprocating prime mover gave way to direct connected units of somewhat larger size. These were superseded by still larger units with compound and condensing prime movers, which in turn were superseded by the steam turbine driven unit.

In the last few years a number of coal companies have installed mixed pressure turbines, this being done to take advantage of the great quantities of steam being wasted, at atmospheric pressure, from the numerous engines and pumps employed at the collieries.

Where these mixed pressure turbines have been installed, suitable water in sufficient quantity has almost invariably been unobtainable, and for this reason it has been necessary to erect cooling towers to overcome the difficulty.

The earlier generating stations supplied direct current at approximately 220 volts, but the present tendency is toward the generation of alternating current at not less than 2,300 volts, and at a frequency of 25 or 60 cycles.

Under the earlier conditions of low voltage it was uneconomical to transmit electric power for distances much in excess of a mile. For this reason, it was generally necessary to install a power plant at each colliery where electric power was required. Now, however, due to the ease of transmitting and transforming alternating current, power plants are growing many times larger in size instead of increasing so fast in number, and the modern plant sends its energy at high voltage to all collieries requiring current, regardless of distance, in the sense in which this factor was once considered.

In 1887 the first generating station was installed. Between that year and 1895, six generating stations were installed, with an aggregate capacity of 459 K. W. Between 1895 and 1914, a period of nineteen years, a total of 68,000 K. W. in generating capacity has been installed. This represents an increase approximately of 15,000% over that installed up to 1895; and in addition to this, power is purchased to an extent that would represent about 11,000 K. W. station capacity.

TRANSMISSION OF ELECTRICITY

In the early days electric power was generated and transmitted at either 250 or 500 volts direct current. The transmission lines usually consisted of about 250,000 C. M. solid wire connecting the power house to the inside workings by way of the main shaft. The trolley wire was of round cross section and seldom larger than 2-0 B. & S. gauge.

The trolley wire was held in place by shield type clamp ears which in turn were fastened to cap and cone type hangers. While at the present time insulators and this type of hanger are still in use, yet in the meantime a great variety of insulators and mechanical clamps have been developed and tried out and a number of different types are in very general use. These are, however, all adopted for supporting the grooved trolley wire which is now almost universally used.

The original bonding consisted of soft drawn copper wire held in place by means of channel pins and this method of bonding is still in very general use, although for the more important haulage roads, more efficient bonds of the pin expanded or compressed terminal types are being adopted.

With the advent of the central station generating power at high voltage, the primitive transmission of comparatively short distances has been extended to upward of twenty (20) miles. Wooden poles are in general use for the transmission line although a few concrete poles are in service under test and a few transmission lines are being constructed using steel towers. The general details of construction have, however, been very much improved. In order to facilitate the distribution of electricity, it is now customary to take the power cables into the mine through bore-holes driven for this particular purpose, when conditions are such as to warrant it, thus eliminating unnecessarily long circuits. The cables used in these bore-holes differ greatly in their make-up: rubber, paper, and varnished cambric have been used as insulating material; some have been covered with woven braid impregnated; others encased with a lead sheath, and still others have the lead sheath and armor.

In general, there are now about 169 miles of wooden pole transmission line on the surface and 754 miles of trolley line inside.

SUB-STATIONS

In order to utilize the output of the modern power plant for electric mine locomotives, undercutting machines, and other 250 or 500 volt D. C. equipment, it is necessary to convert the high tension alternating current into direct current, and numerous sub-stations are now installed, either on the surface or below ground, near the center of distribution of the D. C. load.

These sub-stations contain rotary converters or motor-generator sets, ordinarily of not less than 100 K. W. capacity, but sometimes as large as 750 K. W. The largest direct current sub-station at present has a capacity of 1,250 K. W.

The motors of the first motor-generator sets were of the squirrel cage induction type, but the present tendency is to use a synchronous motor in order to give better control of the power factor.

The total D. C. capacity of the sub-stations at the present time is approximately 22,000 K. W's, about equally divided between motor generator sets and rotary converters, the former ranging in size from 20 to 750 K. W's and the latter from 100 to 500 K. W's.

ELECTRICAL PUMPING

In 1891 the first electrically operated pump was installed in the Forest City operation of the Hillside Coal and Iron Company. This was a 4"x4" vertical triplex Gould pump.

The second was at the William A. Colliery of the Connell Coal Company, Duryea. This was a 6½"x8" horizontal triplex plunger pump, operated by a 15 HP motor.

The third was in 1892 at the Mt. Lookout Colliery. This was a 7½"x12" duplex double acting piston pump. This pump is still in operation.

The next, in April, 1894, at the Ontario Colliery of the Scranton Coal Company, was a 5"x6" vertical Knowles pump, mounted on a truck so that it could be lowered in a slope. This pump had a capacity of 60 gallons per minute and has been in service 19 years.

Since that time a great many motor driven pumps have found places in anthracite mines.

Nearly all of the earlier electric pumps were of the small vertical triplex plunger type, with double reduction gears, but these gave way gradually to the horizontal plunger pump with single reduction gears. Later, however, much larger pumps, of both the vertical and horizontal types, were used, the largest being driven by motors of 275 H. P.

Within the last ten years the centrifugal pump has made great strides, until now there is a very large number of these pumps in the larger sizes, and the tendency seems to be towards its nearly, if not quite, supplanting the motor-driven plunger pump where the quantity of water to be pumped approaches 750 to 1,000 gallons per minute.

The largest pumps of this type are at the Hampton water shaft of the D. L. & W. R. R. Company, each having a capacity of 5,000 gallons per minute against 500 ft. head, and driven by a direct connected 1,000 H. P. induction motor.

Large motor-driven centrifugal pumps are now being used to unwater a flooded mine containing over one-half billion gallons of water, the pumps being required to work in two compartments of a shaft, the size of each compartment being only 6x10 feet and 585 feet deep. The mine has been flooded for approximately 14 years, and there is an inflow of 2,000 gallons per minute. No other method would have been practicable for this work on account of the great depth and limited space. The work is proceeding successfully and in about four months the water has been lowered 225 feet and one vein has already been unwatered.

For local dips in different sections of the mine a favorite pump is the horizontal triplex plunger type, driven by an electric motor of from 5 to 10 H. P. taking power from a trolley line. There are hundreds of these in service and they are proving of great value. To accomplish the work they are doing would require thousands of feet of steam or air lines, expensive in upkeep, and often containing more water than anything else. In a great many cases, these little electric pumps have supplanted the steam operated ones because of the exceedingly low steam pressure at the pump, to say nothing of the annoyance of the exhaust steam discharged into the air-ways.

The total rated horsepower of motors operating pumps is now approximately 38,500 H. P.

ELECTRIC HOISTS

For handling cars on the extremely severe grades which are encountered in the mines, hoists are necessary. The early hoists were operated by steam or compressed air, but because of the greater advantages of motor-driven hoists, these have gradually replaced the former, particularly those located inside the mine. The present tendency is to use the motor drive.

The electric hoist is the simplest and most compact form, inasmuch as the motor can usually be mounted on a common base with the hoisting drum and arranged to drive it directly through gears, thereby forming an entirely self-contained unit and effecting an economy in weight and in the amount of space required for its installation, which is often of appreciable importance when the hoist is located in the mines.

The first electric hoist to be installed was at the Maltby Colliery, at West Wyoming, Pa., of the Lehigh Valley Coal Company, in 1896, the slope being 1,200 feet long. The hoist was manufactured by the Lidgerwood Manufacturing Company and driven through double reduction gears by a G. E. 2,000, 500 volt D. C. motor, controlled by an R-15 controller. This equipment has been in continuous service ever since.

A number of very important changes have been made in the design of electric motor-driven hoists within the past eighteen years. About 7 or 8 years ago, the first A. C. variable speed induction motor-driven hoist, with drum type of control, was tried out. A few of the later equipments have used the automatic contactor or liquid rheostat type of control.

At the Hampton water shaft of the D. L. & W. R. R. Company there is an interesting and unusual type of hoisting equipment which was installed in 1905. This consists of a large coned drum, hoisting the water in buckets which are installed similar to the ordinary hoisting equipment.

The motor is 800 H. P. and runs at 225 RPM. It is of the squirrel cage type and operates continuously, that is, it does not stop and reverse.

The reversing of the drum proper is done by means of clutches located on an intermediate shaft. These clutches are controlled by air cylinders released by gravity. Control of the air is in turn effected by solenoids as is also the brake: thus there are only three direct current solenoid circuits to control the starting, stopping, and reversing of the equipment. This is done automatically by means of a

special device operated from the main drum shaft and a smaller shaft continually operated by the motor. The buckets hold about 3,200 gallons and the equipment hoists 76 buckets an hour.

There is being installed at the present time at the Truesdale Colliery of the D. L. & W. R. R. Company a hoist driven by a 600 H. P. induction motor with liquid rheostat. The hoist will have a rope speed of 1,200 feet per minute and a rope strain of 25,000 lbs.

The Lehigh Coal and Navigation Company are about to install two electrically operated shaft hoists driven by 2,200 volt 3-phase 292 RPM 750 H. P. motors. The shaft is 1,050 feet deep.

There are three applications of shaft hoists at the present time, one at the Hampton water shaft for hoisting and lowering men, operated by a 30 H. P. motor; one at the Washburn Street air shaft, D. L. & W. R. R. Company operated by a 35 H. P. motor. This shaft is used as a second opening. The third installation is at the Clear View Coal Company. This is used for hoisting coal and was installed in 1912 and operated by a 112 H. P. motor. Since the original installation of the first hoist in 1896, up to the present time, or a period of eighteen years, a total of 22,480 H. P. in motor capacity, operating the hoists, has been installed.

LOCOMOTIVES

The first locomotive was installed in 1887 at the Pennsylvania Railroad Company's Lykens Valley operation. The particular distinctive features of this locomotive were: single motor, the use of chain drive, water rheostat controller and overhead rail contact.

The second was made by the Thompson-Houston Company and installed at the Erie Colliery of the Hillside Coal and Iron Company at Mayfield, in 1889. This locomotive was equipped with a single motor, double-reduction gears, side rods, and pantagraph trolley.

In 1891, two 12-ton "Terrapin Back" side rod locomotives were placed in operation at the mines of the Hillside Coal and Iron Company at Forest City. These were also equipped with single motors and pantagraph trolleys. Each of these locomotives travelled approximately 36 miles per day and handled a total of 33 cars per trip. The average day's work was 511 cars.

In 1893 at the Mt. Lookout Coal Company, Wyoming, there was installed a 6-ton locomotive equipped with two 15 H. P. motors.

In 1894, at the D. L. & W. R. R. Company's Bellevue Colliery, a 10-ton locomotive.

In 1894, at the New York and Scranton Coal Company's Ontario Colliery, a 7-ton locomotive for use in a tunnel.

In 1895, at the Johnson Mines, Green Ridge, a 6½ ton locomotive.

Since these first locomotives were installed, various improvements in construction and design have been adopted to meet the constantly increasing demands required in the locomotive performance.

About the year 1902, the idea was conceived that if the locomotive could be so designed that it would operate for distances of five or six hundred feet away from the trolley wire, by means of an automatic cable reel device, such a locomotive would fill a long felt want,

in that it would permit the displacing of a larger number of mules used solely for the purpose of gathering the coal from the chambers. The problem was carefully studied and a locomotive of this type brought out, the first one having a vertical reel driven by chain from one of the axles to the locomotive.

A large number of such equipments were afterwards used, but later this method of driving the reel was given up and an independent motor used instead. Today, practically all new cable reel equipments are driven by independent motors. Reels of both the vertical and horizontal types are used.

The present day locomotives are usually operated by two railway type motors, one carried from each of the two axles, with controllers of the series and parallel type. The sides and end frames are usually made of steel, instead of cast iron as used in the earlier types. There is a strong tendency to use cast grid resistance to the exclusion of other types formerly used, and more attention is being paid to the size of connecting wires and the quality of insulation used.

In most cases, incandescent lamps are used in the headlights, but in a few instances, arc headlights are being tried out.

There has been a constant improvement in the design of the motors themselves, and a decided tendency to increase the horsepower capacity for a given weight of locomotive, as well as to reduce the locomotive speed.

There is also a strong inclination to use motors having interpoles and ball bearings for the armatures, although motors not provided with either of the latter, are giving very satisfactory service.

The motor casings are now usually split diagonally and suspended from the lower half of the casing, thus permitting easy removal of the top half for inspection and repairs.

Recent locomotives have, in some instances, been provided with what is commonly known as a "crab device" which is in reality a small independent or clutch driven winding drum that can be used for hauling the mine cars out of a chamber to the maintrack. When this device is not operated by an independent motor, the arrangements are such that by means of a clutch one of the locomotive motors is used to drive it. In a few cases, there are locomotives in service equipped with both cable reel devices and crab equipment.

The use of electric locomotives has permitted the driving of gangways and chambers in a more systematic manner than was formerly possible with mules, when it was necessary to more or less carefully grade the roads to facilitate haulage. As a result, the gangways are now driven in a regular manner, regardless of moderate grades, thus naturally increasing the duty of the locomotives, and this condition accounts largely for the necessity of increasing the horsepower capacity of locomotives at the present day over those used in the past. Increase of car weights and increased length of hauls has also affected the motor capacity required.

In recent years, considerable thought and attention has been given the use of storage battery locomotives, but up to the present time there is only one in use in the anthracite mines.

A combined trolley and storage battery locomotive has also been seriously considered and experimentally tried out.

From 1887, when the first locomotive was installed, to 1895, a period of eight years, a total of eight locomotives were put in service.

From 1895 to 1914, a period of nineteen years, a total of approximately 951 locomotives were installed.

Since the electric mine locomotive has been in use, it has erroneously been termed a "motor." We strongly recommend that this usage of the word be discontinued, and the term "electric locomotive" used instead.

BREAKER DRIVES

In October, 1902, the first individual motor-driven breaker was placed in operation. The motors were of the direct current type, operated at 250 volts, the power supplied from engine driven generators at the Colliery. These motors were in service until about three years ago when they were replaced with alternating current motors, as A. C. power was available from a central station built in the meantime.

Since that time four other new breakers have been equipped with individual motor drives, and others are under course of construction, A. C. motors being used in all cases.

The motors used in the breaker vary in size from 5 to 75 H. P., and are what is known as the squirrel cage type, except the main conveyors which are driven by motors of the wound rotor type, varying in size from 150 to 200 H. P.

In addition to the motors used in the breaker, there are numerous motor installations around various collieries driving equipments such as rock pulverizers, refuse conveyor lines, pumps for supplying water to washeries and breaker annexes, ventilating fans, endless car hauls, coal feeders for main conveyors, coal conveyors to the boiler plants, ash conveyors, machine shops, carpenter shops, blacksmith shops, force blowers, box car loaders and prop saws.

There is installed at the present time in breaker motor drives and miscellaneous motors about the colliery, a total of about 18,840 horsepower, of which about 6,000 H. P. is used in breaker drives.

COAL CUTTING MACHINES AND MINE CONVEYORS

In order to make mining of the thin seams commercially practicable, it has become necessary to resort to some mechanical means of cutting the coal and conveying it.

Machines for under-cutting coal were first tried out in the anthracite region about 1902, but were not seriously considered until about four years ago. Since that time there has been a gradual increase in the number used, particularly in the mining of the thinner seams. On account of the varying conditions under which these machines have been tried, various types have been used, and undoubtedly other types will be developed to meet the requirements.

The motors have ordinarily been rated at 35 H. P. on intermittent rating, but where the equipment must be operated more or less continuously, for a considerable period of time, indications are that motors of greater horsepower will be required. Some few machines have been provided with 50 H. P. motors.

One of the recent developments is a machine so constructed that the cutter bar can be raised or lowered within certain limits, and can also be rotated about a vertical axis, this machine being able to make its cut at the top of the vein or somewhat lower.

During the last two years in certain localities where thin seams are mined, motor-driven conveyors have been installed to deliver the coal from the working face into the mine cars. The first conveyor of this type was installed in 1912. At this time, there are probably about 30 such equipments in service.

There is now about 2,900 H. P. of motor capacity in coal cutting machines and 225 H. P. for conveyors.

TELEPHONES

No record has been obtained of the number of telephones in service, but there are probably between two and three thousand. Most of these are of the ordinary wooden type, but for special cases, moisture-proof types enclosed in metallic cases are used when the conditions are severe due to dampness or other causes.

SIGNALS

Slopes and planes. The usual signal system consists of an ordinary electric bell, with dry or wet batteries, located in the hoist room. The signals are given by pressing together the two bare signal wires which are attached to insulators along the slope or plane, or by pressing the push button located at the various lifts.

Frequently, trip runners are provided with a pocket telephone, by means of which they could communicate with the hoist operator who is provided with a similar equipment.

SHAFT SIGNALS

While not general, there are a great many electric shaft signals of various types, but the majority consist of the ordinary vibrating bells and push buttons at the various landings, with bells and annunciator in the hoist house, and push button for the return signal. These are operated by dry or wet cells.

In addition, there are telephones at the various landings connected to the hoist house. The signal and telephone wires are usually insulated with rubber and made up in the form of a cable, which is encased in a lead sheath or in a circular loom.

From the foregoing, it will readily be seen that the use of electricity in and about the mines has gradually increased for the past twenty years until it has now become a most important factor. The first more or less crude installations have given way to the large and efficient centralized generating stations, with their accompanying transmission lines, transformers, and direct current sub-stations. In all probability electric power will continue to be used at an increasing rate until it largely supersedes the direct use of steam and compressed air.

SUMMARY OF APPARATUS IN SERVICE

GENERATING EQUIPMENT

ENGINE DRIVEN

| | KW's. |
|-------------------|--------------|
| Simple, | 37,016 |
| Compound, | 6,750 |
| Condensing, | 330 |
| Total, | 44,096 KW's. |

TURBINE DRIVEN

| | |
|----------------------|--------------|
| High Pressure, | 21,087 |
| Low " | 200 |
| Mixed " | 2,875 |
| Total, | 24,162 KW's. |

Grand Total, 68,258 KW's.

POWER PURCHASED

| | |
|--|--------------|
| Kilo-Watt Demand, | 11,553 KW's. |
| Grand Total—Station Capacity and Power Purchased,..... | 79,811 KW's. |

COOLING TOWERS

Number of Towers in Service, 4

TRANSMISSION

| | |
|--------------------------------------|------------|
| Wooden Pole Line above Ground, | 169 miles |
| Cables in (Duct, | 14,900 ft. |
| (Bore-hole, | 21,750 ft. |
| Trolley Wire (underground), | 754 miles |
| Contact Rail (underground), | 3½ miles |

SUB-STATION

| | KW's. |
|-----------------------------|--------------|
| Motor Generator Sets, | 11,060 |
| Rotary Converters, | 10,850 |
| Total, | 21,910 KW's. |

ELECTRICALLY OPERATED EQUIPMENT

| | |
|---|-------------|
| Breaker and Miscellaneous, | 19,170 HP. |
| Lifts, | 23,280 " |
| Pumps, | 38,500 " |
| 951 Locomotives (Est. at 60 HP. per locomotive,)..... | 57,060 " |
| Coal Cutting Machines, | 2,920 " |
| Lighting (2,727 KW's.), | 3,650 " |
| Heaters (75 KW's.), | 100 " |
| Total, | 144,680 HP. |

WORK OF THE MINE INSPECTORS

During the year they spent 3,402½ days inspecting mines; 121 days inspecting machinery and plants; 403½ days investigating accidents; 85 days attending inquests; 1,084½ days at office work; 24½ days inspecting maps and plans; 587½ days in consultation on mining matters; 18 days in consultation on legal matters; 92 days traveling on duty; 124 days on sick list; 105 days legal holidays; 43 days attending court; 6½ days at mine fires; 170½ days on Mine Foremen's Examining Boards; 20 days attending mine inspectors' examination; 28½ days attending funerals; 2 days on account of deaths in families; 100 days on vacation; 41 days on private business; a total of 6,459 days, or 308 days a year for each of the 21 inspectors.

ACCIDENTS

The accident record for 1915 was comparatively a good one, being very close to the remarkable record of 1914 when the number of fatalities was the lowest for several years. There were 1,030 fatal accidents in 1915 as against 1,013 in 1914, of which 588 occurred in the anthracite region and 442 occurred in the bituminous region. The year 1914 had the exceptional good fortune to pass without any great catastrophes, while the year 1915 was marred by three serious explosions of gas and dust, one in the anthracite region and two in the bituminous region, by which forty-one persons were killed.

In the seventh anthracite district an explosion of gas occurred at the Prospect colliery of the Lehigh Valley Coal Company, February 17, by which thirteen persons were killed.

A brief history of this catastrophe is given herewith.

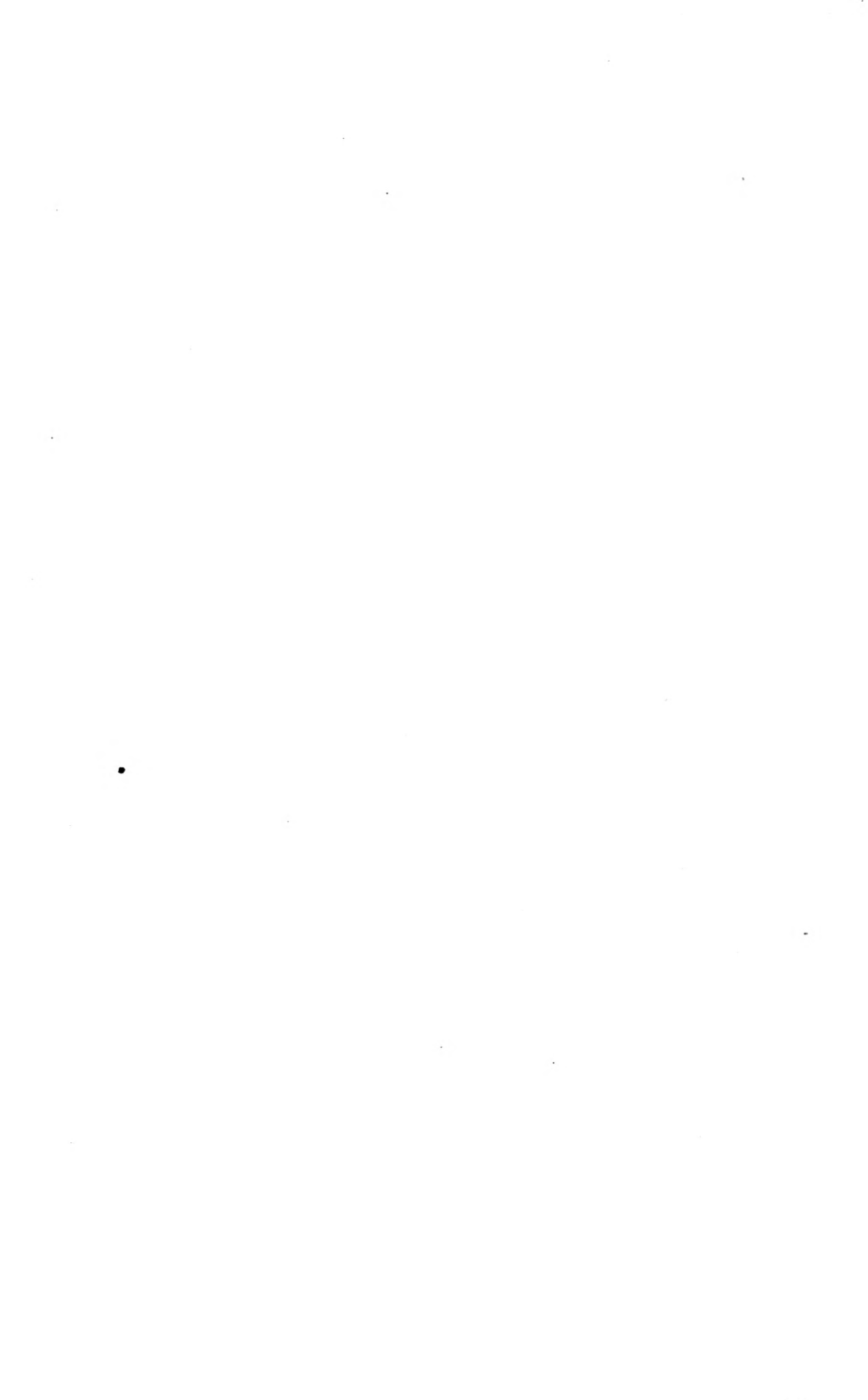
EXPLOSION OF GAS AT THE PROSPECT COLLIERY

The Prospect Colliery of the Lehigh Valley Coal Company is situated in the Seventh Anthracite District, Luzerne county, Inspector T. J. Williams.

An explosion occurred in the Red Ash vein, No. 10 slope of this colliery at 12 o'clock noon, February 17, causing the death of thirteen men and boys. This catastrophe was caused by a rush of coal in chamber No. 3 by which a body of gas was forced down on the naked light of a miner who was sitting at some distance from the face.

The report of the inspector of the district, T. J. Williams, is printed herewith together with the verdict of the Coroner's Jury. Immedi-





ately after the explosion an examination was made of the mine by Inspectors S. J. Jennings, Joseph J. Walsh and D. T. Davis in company with Inspector T. J. Williams.

The reports and inquest relating to the case are printed herewith, together with a tracing of the mine.

REPORT OF INSPECTOR T. J. WILLIAMS

On February 17, 1915, a disastrous explosion occurred in the Red Ash vein of the Prospect colliery at No. 10 Slope, at about 12.00 o'clock, noon, causing the death of 13 men and boys, 8 of whom were instantly killed, 1 died the same day, and 4 died the next day.

When I arrived at the shaft I was met by Thomas Thomas, General Mining Superintendent. We went inside to the scene of the accident and were informed that all of the dead and injured had been taken outside, with the exception of Daniel Souchak, laborer, who was still missing. He worked in chamber No. 4, road No. 788. We made a diligent search for the body, but it was not found until the next day, Thursday, at about 5.00 p. m.

The Assistant Foreman in making his usual morning examination found each and every place in this vicinity clear of gas and in a safe condition to be worked. At about 12.00 o'clock, noon, a rush of coal occurred in chamber No. 3 and forced a body of gas down on the naked light of John Lacavitch, a miner, who was sitting at his box 175 feet from the face, causing the explosion.

The force of the explosion traveled through the heading of No. 4 chamber, down chamber No. 3, through heading to chamber No. 2, into chamber No. 1 and down chamber No. 1, destroying in its path all walls, doors, brattices and stoppings. This force was also expended through chambers No. 5 and No. 6 to the reserve pillar. Inside of the reserve pillar, while considerable damage was done in the destruction of walls and brattice, it is apparent that the force exerted in this section was not as destructive as that outside of this pillar. This was due in a large measure to the fact that the force found a resistance too great, owing to the few openings through the reserve pillar, and its effect was localized in chambers 1 to 6 inclusive.

At the foot of chamber No. 1 and inside of the loaded branch on road No. 797A a masonry wall had been built some distance in the heading. The space outside of this wall formed a convenient location for runners and drivers to eat their lunch. This point was also opposite the empty car branch, on which there were standing at the time of the explosion three empty cars. The force of the explosion traveled down No. 1 chamber taking with it all the doors and walls. The runners were evidently sitting down, while David Owens, from the west side of the slope, who had apparently just reached the scene at that instant, probably faced the explosion. The flying debris from the walls threw the boys to the opposite side of the road against the cars killing them instantly, with the exception of David Owens whose death occurred a short time after being removed to the foot of the slope.

The Inside Foreman and his assistants in the rescue work found the following persons killed: John Seranick, Patrick Gavin, (Runners); Bruno Lishinski, Mike Michalo, (Drivers); John Darutis, August Woigast, (Doorboys); John Kabaliski and Daniel Souchak, (Laborers). David Owens died the same day. The following died the next day: Louis Shaka, Miner; John Beelask, Laborer; John Lacavitch and Thomas Broszynyn, Miners.

The flame of the explosion traveled through the heading from chamber No. 3 into chamber No. 2, leaving a fire burning at the outside rib near the face. This was discovered immediately after the rescue of the men. Owing to the heat of the fire and the force of the explosion the face of chamber No. 2 was badly caved which proved to be quite a hindrance to the work of fighting the fire. Owing to the unusual height of the vein, which averaged about 18 feet, there is little doubt that the walls, doors, etc., were unable to offer enough resistance to confine the destruction to these immediate chambers. This was proved by the fact that a number of walls were badly bulged from the force of the explosion.

As a precaution and to prevent the accumulation of gas from being conducted over the fire, it was necessary to build walls and stoppings, 11 in number, so as to conduct the air up chamber No. 3 through the headings to chambers Nos. 4, 5 and 6 and then to road No. 814 and to the west side of the slope. Constant examination was being made to ascertain the condition of the workings east of the fire. It was then decided to drive a heading to the face of chamber No. 2 from the face of chamber No. 1. A heading 5 x 8 feet was driven a distance of 40 feet in ten hours time. A connection was made with the main fire line on the slope and conducted through the heading to the fire, which was the means of putting it out in a very short time. It was then decided to drive a heading from road No. 797A to the face of chamber No. 4 in order that the ventilation might be carried from the workings and not conducted to the vicinity of the fire. The driving of this heading proved to be an important factor in the complete restoration of the ventilation. Due to the hazardous conditions existing after the explosion, namely, fire, bad roof and gas accumulation, the officials in charge should be commended for having restored this section of the mine to its normal condition without any injury whatsoever to any of the employees.

The exact cause of this explosion will probably never be known. The subsequent examination made by Mine Inspectors S. J. Jennings, Joseph J. Walsh, D. T. Davis and myself on the 19th instant, of the face of chamber No. 3, revealed a slip in the vein pitching at an angle of 35 or 40 degrees and starting about 10 feet from the bottom and running up from the face of the top rock. The thickness of the vein at this point is about 18 to 20 feet. The rush of coal off the slip was probably due to either an accluded body of gas of sufficient force to cause the coal to rush, or to the fact that the miner had fired a hole on the west side of the chamber fracturing the top coal to the slip and causing it to rush; but in either event the force of the rush of coal was sufficient to force the gas to travel with the air a distance of about 175 feet to the miner's box where it was ignited from the miner's lamp. This theory is supported by the statement of John Lacavitch who was the miner in chamber No. 3 and who was found in the section between the main doors as he was walking out.

When questioned by the Mine Foreman he made the following statement: "Rush of coal and cave came in my place and the gas lit on my lamp at the box."

An inquest was held by Coroner Marley, March 11, 1915, and the following verdict given: "That on February 17, 1915, a body of gas was ignited which exploded, causing the death of John Lacavitch and 12 others. The evidence further shows that the place where the accident happened had been gaseous before this time and that the gas on this occasion arose from a slide. The evidence further shows that the miners working in and about this place with their laborers, had been allowed to use naked lamps. From all the evidence we find that the deceased and 12 others came to their death at the Prospect Mine of the Lehigh Valley Coal Company on February 17, 1915, from injuries resulting from a gas explosion, and from all the evidence we find the officials of the company neglectful in allowing naked lamps to be used in gaseous workings instead of demanding the use of safety lamps, and furthermore we recommend the use of the new electric safety lamps that recently passed a successful test by the Federal Bureau of Mines and were approved by the Pennsylvania Department of Mines for use in gaseous mines. We believe that in all workings, workmen should be provided with ample light, especially in veins where the coal is from 16 to 20 feet in height."

CAUSES AND LOCATION OF FATAL ACCIDENTS

The records for the year show that as usual the two principal causes of fatal accidents in the anthracite mines were (1) falls of coal, slate and roof, and (2) cars. The total number of inside fatal accidents was 527, of which 268 or 50.85 per cent. were caused by falls of coal, slate and roof, and 81 or 15.37 per cent. by cars. The other causes were explosions of gas, 33 or 6.26 per cent.; explosions of powder and dynamite, 8 or 1.52 per cent.; electricity, 4 or .76 per cent.; blasts, 69 or 13.09 per cent.; falling into shafts and slopes, suffocation by gas and miscellaneous causes, 64 or 12.15 per cent.

The accidents by falls of coal occurred as follows: at face of working places, 41; at pillar work, 18; on gangways while timbering and repairing, 2; in heading, 1; a total of 62, or 23.13 per cent. By falls of slate at face of workings, 27; at pillar work, 9; on gangways while timbering and repairing, 1; in old workings, 1; a total of 38, or 14.18 per cent. By falls of roof at face of workings, 122; at pillar work, 30; on gangways while timbering and repairing, 10; in old workings, 2; on slopes, 3; in heading, 1; a total of 168 or 62.69 per cent.

The total number of fatal accidents by falls of coal, slate and roof at face of working places was 190, or 70.89 per cent. of all accidents from falls; at pillar work, 57 or 21.27 per cent.; on gangways while timbering and repairing, 13 or 4.85 per cent.; in heading, 2 or .75 per cent.; in old workings, 3 or 1.12 per cent.; on slopes while timbering and repairing, 3 or 1.12 per cent.

Eighty-one persons were killed by cars, 50 of whom were killed on gangways, 12 on slopes, and 19 at other places.

Sixty-nine persons were killed by blasts, and eight were killed by explosions of powder and dynamite on gangways and at other places.

Of the accidents on the surface, 28 or 45.90 per cent. were caused by cars; 10 or 16.39 per cent. by machinery, and 23 or 37.71 per cent. by other causes.

The table submitted herewith shows the accidents in each inspection district by falls and other causes.

These reports show 165 miners killed by falls; 116 or 70.30 per cent. were killed at face of working places; 42 or 25.46 per cent. while removing pillars; 5 or 3.03 per cent. on gangways while timbering and repairing and 2 or 1.21 per cent. in cross headings. Of the 165 fatalities, 105 or 63.64 per cent. were due to the carelessness or ignorance of the victims, 1 or .60 per cent. to the carelessness of others and 59 or 35.76 per cent. were unavoidable.

Four miners were killed by cars; 2 or 50.00 per cent. on gangways and 2 or 50.00 per cent. in chambers. Of the 4 fatalities, 3 or 75.00 per cent. were due to the carelessness or ignorance of the victims and 1 or 25.00 per cent. was unavoidable.

Fifteen miners were killed by explosions of gas; 13 or 86.66 per cent. of whom were in chambers; 1 or 6.67 per cent. in gangway and 1 or 6.67 per cent. in crosscut. Of the 15 fatalities, 7 or 46.67 per cent. were due to the carelessness or ignorance of the victims, 2 or 13.33 per cent. to the carelessness or ignorance of others, 3 or 20.00 per cent. were unavoidable and 3 or 20.00 per cent. responsibility not defined.

Eight miners were killed by explosions of powder and dynamite: 5 or 62.50 per cent. were killed at face of workings; 2 or 25.00 per cent. on gangways and 1 or 12.50 per cent. in crosscut. The 8 fatalities were due to the carelessness or ignorance of the victims.

Fifty-four miners killed by blasts. Of the 54 fatalities, 46 or 85.19 per cent. were due to the carelessness or ignorance of the victims and 8 or 14.81 per cent. were unavoidable.

One miner killed by falling down chamber, the accident was unavoidable.

Three miners killed by falling down manway; 2 or 66.67 per cent. were due to the carelessness or ignorance of the victims and 1 or 33.33 per cent. was unavoidable.

One miner killed by falling down pumpway, the accident was unavoidable.

Two miners killed by falling down chutes; 1 or 50.00 per cent. was due to the carelessness or ignorance of the victim and 1 or 50.00 per cent. was unavoidable.

Three miners killed, crushed at batteries; 1 or 33.33 per cent. was due to the carelessness or ignorance of the victim and 2 or 66.67 per cent. were unavoidable.

Two miners killed by electricity on gangway, through their own carelessness.

Four miners suffocated by gas through their own carelessness.

One miner suffocated by smoke through his own carelessness.

One miner suffocated by rush of culm in chamber through his own carelessness.

Two miners killed, struck by coal; 1 or 50.00 per cent. due to the carelessness of the victim and 1 or 50.00 per cent. was unavoidable.

Two miners killed, struck by rock, the accidents were unavoidable.

Three miners killed, struck by timber, the accidents were unavoidable.

One miner killed, struck by sheet iron, through his own carelessness.

One miner killed, struck by windlass, through his own carelessness.

One miner killed, rush of gob, through his own carelessness.

One miner killed, drowned in watercourse, through his own carelessness.

Six miners killed, by rush of coal; 2 or 33.33 per cent. were due to the carelessness or ignorance of the victims and 4 or 66.67 per cent. were unavoidable.

The total number of miners killed was 281, of whom 189 or 67.26 per cent. were killed through their own carelessness or ignorance, 3 or 1.07 per cent. through the carelessness of others, 86 or 30.60 per cent. were unavoidable and 3 or 1.07 per cent. responsibility not defined.

Eighty-eight miners' laborers killed by falls, 69 or 78.41 per cent. of whom were killed at face of workings; 14 or 15.91 per cent. while removing pillars; 3 or 3.41 per cent. on gangways while timbering and repairing and 2 or 2.27 per cent. in old workings. Of the 88 fatalities, 38 or 43.18 per cent. were due to the carelessness or ignorance of the victims, 16 or 18.18 per cent. to the carelessness or ignorance of others, 33 or 37.50 per cent. were unavoidable and 1 or 1.14 per cent. responsibility not defined.

Twenty-two miners' laborers killed by cars, 9 or 40.91 per cent. of whom were killed on gangways; 4 or 18.18 per cent. in chambers; 5 or 22.73 per cent. on slopes; 2 or 9.09 per cent. on planes and 2 or 9.09 per cent. on drifts. Of the 22 fatalities, 18 or 81.82 per cent. were due to the carelessness or ignorance of the victims, 1 or 4.54 per cent. to the carelessness of others and 3 or 13.64 per cent. were unavoidable.

Eight miners' laborers killed by explosions of gas, 6 or 75.00 per cent. of whom were killed in chambers and 2 or 25.00 per cent. on gangways. Of the 8 fatalities, 3 or 37.50 per cent. were due to the carelessness or neglect of the victims, 1 or 12.50 per cent. to the carelessness of others, 1 or 12.50 per cent. were unavoidable and 3 or 37.50 per cent. responsibility not defined.

Eleven miners' laborers were killed by blasts. Of the 11 fatalities 9 or 81.82 per cent. were due to the carelessness or ignorance of the victims, 1 or 9.09 per cent. to the carelessness of others and 1 or 9.09 per cent. were unavoidable.

One miner's laborer electrocuted on gangway through his own carelessness.

One miner's laborer suffocated by coal in chute through his own carelessness.

One miner's laborer suffocated by rush of coal through the carelessness of others.

One miner's laborer suffocated by smoke through his own carelessness.

Two miners' laborers killed by falling down shaft through their own carelessness.

One miner's laborer killed by falling down chamber, accident was unavoidable.

One miner's laborer killed by falling down chute through his own carelessness.

One miner's laborer killed by falling into sump through his own carelessness.

One miner's laborer killed, struck by piece of rock, the accident was unavoidable.

Two miners' laborers killed, struck by piece of coal, the accidents were unavoidable.

One miner's laborer killed, struck by timber, the accident was unavoidable.

One miner's laborer killed by a rush of water from culm pipe through his own carelessness.

The total number of miners' laborers killed was 143, of whom 76 or 53.14 per cent. were due to the carelessness or ignorance of the victims, 20 or 13.98 per cent. to the carelessness of others, 43 or 30.08 per cent. were unavoidable and 4 or 2.80 per cent. responsibility not defined.

Forty drivers and runners were killed. Of this number 20 or 50.00 per cent. were killed by cars on gangway; 2 or 5.00 per cent. by cars in tunnel; 3 or 7.50 per cent. by cars on slopes; 1 or 2.50 per cent. by cars on plane; 1 or 2.50 per cent. by cars at foot of shaft; 1 or 2.50 per cent. by fall at face of workings; 5 or 12.50 per cent. by explosions of gas in chambers; 1 or 2.50 per cent. by explosions of gas in old workings; 2 or 5.00 per cent. by explosions of blasts; 1 or 2.50 per cent. by rush of coal in chute; 1 or 2.50 per cent. by being kicked by a mule; 1 or 2.50 per cent. by being scalded in sump and 1 or 2.50 per cent. by falling into slope. Of the 40 fatalities, 24 or 60.00 per cent. were due to the carelessness or ignorance of the victims, 1 or 2.50 per cent. to the carelessness of others, 10 or 25.00 per cent. were unavoidable and 5 or 12.50 per cent. responsibility not defined.

Eight company men were killed. Of this number 2 or 25.00 per cent. were killed by falls on gangway while timbering and repairing; 2 or 25.00 per cent. were killed by cars on gangway; 1 or 12.50 per cent. by electricity; 1 or 12.50 per cent. by falling down shaft; 1 or 12.50 per cent. by falling down chute and 1 or 12.50 per cent. by being struck by timber. Of the 8 fatalities, 7 or 87.50 per cent. were due to the carelessness or ignorance of the victims and 1 or 12.50 per cent. were unavoidable.

Fifty-five other persons were killed, including 1 mine foreman, 4 assistant mine foremen, 1 fire boss, 10 doorboys and helpers, 1 doorman, 3 brakemen, 2 footmen, 5 rockmen, 1 pillar boss, 2 carpenters, 4 machine runners, 2 motormen, 2 engineers, 1 headman, 6 timbermen, 1 road cleaner, 1 trackman, 1 patcher, 2 drillers, 2 bottommen, 1 loader, 1 machinist and 1 fan turner. Of the 55 fatalities, 29 or 52.73 per cent. were due to the carelessness or ignorance of the victims, 2 or 3.64 per cent. to the carelessness of others, 21 or 38.18 per cent. were unavoidable and 3 or 5.45 per cent. responsibility not defined.

Of the 527 accidents that occurred inside the mines, 325 or 61.67 per cent. are attributed to the carelessness or ignorance of the victims themselves, 26 or 4.93 per cent. to the carelessness of others, 161 or 30.55 per cent. were unavoidable and 15 or 2.85 per cent. responsibility not defined.

Causes and Location of Fatal Accidents, by Districts, 1915—Continued

Districts

Inside

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | Totals |
|-------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------|
| Machinery, | | | | | | | | | | | | | | | | | | | | | | 1 |
| Electricity, | | 1 | | | 1 | | | | | | | | | | | | 3 | | | | | 4 |
| Struck by piece of rock, | | | 1 | | | | | | | 1 | | | | | | | | | | 1 | | 3 |
| Struck by piece of coal, | | | | | | | 1 | | 3 | | | | | | | | | | | | | 4 |
| Struck by windlass, | | | | | | | | | | | 1 | | | | | | | | | | | 1 |
| Struck by timber, | | | | | | | 1 | | 1 | | | | | | 1 | | | | 1 | | | 6 |
| Struck by rope, | | | | | | | | | | 1 | | | | | | | | | | | | 1 |
| Struck by sheet iron, | | | | | | | | | | | | 1 | | | | | | | | | | 1 |
| Rush of water, | | | | | | | | 1 | | | | | | 2 | 1 | | | 1 | 2 | 1 | | 7 |
| Rush of gob, | | | | | | | | | | | | | | | | | | | | | | 1 |
| Rush of coal, | | | | | | | | | | | | 1 | | | | | 1 | | | | | 1 |
| Scalded by falling into sump, | 1 | | | | | | | | | | | | | | | | | | | | | 1 |
| Fell into sump, | | | | | | | | | | | | | 1 | | | | | | | | | 1 |
| Drowned in watercourse, | | | | | | | | | | | | | | | | | | | | | | 1 |
| Cause unknown, | | | | | | | | | | | | | | | | | | | | | | 1 |
| Totals, | 32 | 29 | 24 | 29 | 15 | 45 | 60 | 22 | 39 | 24 | 22 | 11 | 28 | 10 | 15 | 21 | 21 | 21 | 25 | 13 | 21 | 527 |

Outside

| | | | | | | | | | | | | | | | | | | | | | | |
|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| Cars, | 2 | 2 | 1 | | | 2 | 5 | | 2 | | 4 | | | 1 | 2 | 1 | 2 | 1 | 3 | 1 | | 28 |
| Machinery, | 3 | 2 | 1 | | | | | | | | | 1 | | | | | | | | | | 10 |
| Electricity, | | | | | | | | | | | | | | | | | | | | | | 1 |
| Boiler explosions, | | | | | | | | | | | | | | | | | | 2 | | | | 2 |
| Falling off ladder, | | | | | | | | 1 | | | | | | | | | | | | | | 1 |
| Falling under coal wagon, | 1 | | | | | | | | | | | | | 1 | | | | 1 | | | | 3 |
| Falling in breaker, | | | | | | 1 | | | 1 | | | | | | | | | | | | | 3 |
| Suffocated by rush of clay and sand, | | | | | | | | | | | | | | | | | | | | | | 1 |
| Suffocated by rush of coal, | | | | | | | | | 1 | | | | | | | | | | | | | 1 |
| Suffocated by piece of coal, | | | | | | | | | | | | | | | | | 1 | | | | | 1 |
| Struck by timber, | | | | | | | | | 1 | | 2 | | | | | | | | | | | 3 |
| Struck by rope, | | | | | | | | | | | | 1 | | | | | | | | | | 1 |
| Struck by spool of rope, | | | | | | | | | | | | | | | | | 1 | | | | | 1 |
| Struck by shaft guide, | | | | | | | | | | | | | | | | | | 1 | | | | 1 |
| Struck by windlass, | | | | | | | | | | | | | | | | | | | 1 | | | 1 |
| Jumping off ash cart, | | | | | | | | 1 | | | | | | 1 | | | | | | | | 1 |
| Rush of earth, | | | | | | | | | | | | | | 1 | | | | | | | | 1 |
| Clothing caught fire, | | | | | | | | | | | | | | | | | | | | | | 1 |
| Scalded by steam, | | | | | | 3 | 5 | 2 | 2 | | | | | 6 | 2 | 1 | 7 | 4 | | | | 61 |
| Totals, | 6 | 4 | 2 | | | 3 | 5 | 2 | 2 | 2 | 6 | | 2 | | 2 | 1 | 7 | 4 | 5 | 1 | 1 | 61 |
| Grand totals inside and outside, | 38 | 33 | 26 | 29 | 15 | 48 | 65 | 24 | 41 | 26 | 28 | 11 | 30 | 16 | 17 | 22 | 28 | 25 | 30 | 14 | 22 | 588 |

CAUSES AND LOCATION OF FATAL ACCIDENTS INSIDE, 1910-1915, INCLUSIVE

This table shows that the causes of accidents and the places they occur are very much the same from year to year. This is especially true of falls of coal, slate and roof that occur at the face, while removing pillars, while repairing gangways or while working at the face of gangways.

The accidents by cars and the explosions of blasts occur from year to year in about the same way and at the same relative places.

During the period covered by the table 1,512 fatal accidents inside were caused by falls or 46.67 per cent. of the total number; 505 by cars, or 15.59 per cent. of the total number; 385 by blasts, or 11.88 per cent. of the total number; 100 by powder explosions, or 3.08 per cent. of the total number and only 213 by explosions of gas, or 6.58 per cent. of the total number.

Most of the victims could have been saved had they used ordinary precaution.

The accidents from blasts and explosives number 18 per cent. and are chargeable directly to the miner who extracts the coal. Of the 2,017 accidents by falls and cars, at least one-half could have been prevented by proper prudence and care on the part of the victims or others.

Causes and Location of Fatal Accidents, Inside, 1910-1915, Inclusive

| | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | Totals | Percentages as to location | Percentages of total accidents inside |
|---|-------|-------|-------|-------|-------|-------|--------|----------------------------|---------------------------------------|
| By falls of coal, slate and roof | | | | | | | | | |
| At face of working places, | 173 | 166 | 153 | 197 | 170 | 190 | 1,049 | 69.38 | 32.38 |
| At pillar work, | 31 | 44 | 37 | 34 | 36 | 57 | 239 | 15.81 | 7.38 |
| On gangways, while timbering and repairing, | 24 | 20 | 36 | 14 | 13 | 13 | 120 | 7.94 | 3.70 |
| Back in chambers, | 21 | 15 | 4 | ..... | ..... | ..... | 40 | 2.64 | 1.24 |
| On slopes, | 2 | 1 | 1 | 2 | 3 | 3 | 12 | .79 | .37 |
| At cross headings, | 2 | 2 | 4 | 4 | 2 | 2 | 16 | 1.05 | .49 |
| In old workings, ..... | ..... | 1 | 3 | ..... | 1 | 3 | 8 | .53 | .25 |
| In chutes, ..... | ..... | 1 | 4 | ..... | ..... | ..... | 5 | .33 | .16 |
| In tunnels, ..... | ..... | 1 | ..... | 1 | ..... | ..... | 2 | .13 | .06 |
| In strange chambers, ..... | ..... | 2 | ..... | ..... | ..... | ..... | 2 | .13 | .06 |
| In airways, ..... | ..... | ..... | 1 | 2 | ..... | ..... | 3 | .20 | .09 |
| At bottom of slopes, ..... | ..... | ..... | 1 | 1 | ..... | ..... | 2 | .13 | .06 |
| On planes, ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | .07 | .03 |
| In sumps, ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | .07 | .03 |
| While riding on cars on gangways, ..... | ..... | ..... | ..... | 6 | 5 | ..... | 11 | .73 | .34 |
| In pump house, ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | .07 | .03 |
| Totals and percentages, | 253 | 253 | 246 | 261 | 231 | 268 | 1,512 | 100.00 | 46.67 |
| By cars | | | | | | | | | |
| On gangways, | 57 | 47 | 55 | 40 | 45 | 50 | 294 | 58.22 | 9.07 |
| In chambers, | 6 | 11 | 2 | 9 | 8 | 8 | 42 | 8.32 | 1.30 |
| On slopes, | 17 | 18 | 14 | 20 | 18 | 12 | 99 | 19.60 | 3.06 |
| At foot of shafts, | 2 | 4 | 2 | 2 | 1 | 1 | 12 | 2.37 | .37 |
| At foot of slopes, | 8 | 5 | 2 | 4 | 2 | ..... | 21 | 4.16 | .65 |
| At dump chutes, | 2 | 2 | ..... | ..... | ..... | ..... | 4 | .79 | .12 |
| In tunnels, ..... | ..... | 3 | 1 | 6 | 3 | 4 | 17 | 3.37 | .53 |
| At mouth of drifts, ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | .20 | .03 |
| On planes, ..... | ..... | 1 | 2 | 5 | 1 | 4 | 13 | 2.57 | .40 |
| In drifts, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | .20 | .03 |
| At foot of planes, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | .20 | .03 |
| Totals and percentages, | 92 | 92 | 78 | 86 | 76 | 81 | 605 | 100.00 | 15.59 |

Causes and Location of Fatal Accidents, Inside, 1910-1915, Inclusive--Continued

| | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | Totals | Percentages as to location | Percentages of total accidents inside |
|---------------------------------------|-------|-------|-------|-------|-------|-------|--------|----------------------------|---------------------------------------|
| By explosions of gas | | | | | | | | | |
| In chambers, | 14 | 13 | 22 | 20 | 31 | 28 | 123 | 60.09 | 3.95 |
| On gangways, | 3 | 9 | 3 | 2 | ..... | 3 | 20 | 9.39 | .62 |
| In old workings, | 2 | 3 | 9 | 4 | 3 | 2 | 23 | 10.80 | .71 |
| On slopes, | 1 | ..... | ..... | 1 | 1 | ..... | 3 | 1.41 | .09 |
| In cross headings, ..... | ..... | 4 | ..... | ..... | ..... | ..... | 5 | 2.55 | .16 |
| In tunnels, ..... | ..... | 5 | ..... | 20 | 1 | ..... | 26 | 12.21 | .80 |
| In manways, ..... | ..... | ..... | 1 | ..... | 7 | ..... | 8 | 3.75 | .25 |
| Totals and percentages, | 20 | 34 | 35 | 48 | 43 | 33 | 213 | 100.00 | 6.58 |
| Suffocated by gas, etc., | 13 | *36 | 5 | 10 | 12 | 10 | 136 | 100.00 | 4.20 |
| By explosions of powder and dynamite | | | | | | | | | |
| At face of working places, | 9 | 6 | 9 | 8 | 11 | 5 | 48 | 48.00 | 1.48 |
| On gangways, ..... | ..... | 13 | 12 | 1 | ..... | 2 | 28 | 28.00 | .86 |
| In cross headings, | 7 | 2 | 4 | 1 | 2 | 1 | 17 | 17.00 | .53 |
| In tunnels, | 1 | ..... | ..... | 1 | ..... | ..... | 2 | 2.00 | .06 |
| Location not given, | 5 | ..... | ..... | ..... | ..... | ..... | 5 | 5.00 | .15 |
| Totals and percentages, | 22 | 21 | 25 | 11 | 13 | 8 | 100 | 100.00 | 3.08 |
| By explosions of blasts | | | | | | | | | |
| At face of working places, | 48 | 59 | 46 | 52 | 76 | 69 | 350 | 90.91 | 10.80 |
| On gangways, | 6 | 1 | ..... | 3 | ..... | ..... | 10 | 2.60 | .31 |
| At pillar work, | 4 | 1 | ..... | ..... | ..... | ..... | 5 | 1.30 | .16 |
| In cross headings, | 1 | 6 | 4 | 5 | ..... | ..... | 16 | 4.15 | .49 |
| In tunnels, | 1 | ..... | ..... | ..... | ..... | ..... | 1 | .26 | .03 |
| In old workings, ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | .26 | .03 |
| On planes, ..... | ..... | ..... | ..... | 2 | ..... | ..... | 2 | .52 | .06 |
| Totals and percentages, | 60 | 67 | 51 | 62 | 76 | 69 | 385 | 100.00 | 11.88 |
| Falling into shafts, slopes, etc., .. | 19 | 21 | 18 | 30 | 47 | 19 | 154 | ..... | 4.75 |
| Crushed at batteries, | 3 | 5 | 4 | 3 | 3 | 3 | 21 | ..... | .65 |
| By electricity, | 3 | 2 | 5 | 1 | 1 | 4 | 16 | ..... | .49 |
| By machinery, | 2 | 4 | ..... | 2 | ..... | 1 | 9 | ..... | .28 |
| Miscellaneous causes, | 22 | 30 | 31 | 43 | 32 | 31 | 189 | ..... | 5.83 |
| Grand totals and percentages, | 509 | 615 | 498 | 557 | 534 | 527 | 3,240 | ..... | 100.00 |

*Pancoast disaster; 72 men killed.

COMPARATIVE TABLE OF ACCIDENTS

Pennsylvania-United States, 1899-1903-1908-1915

In 1899 the number of employes inside and outside the mines of the United States, not including the bituminous and anthracite mines of Pennsylvania, was 178,526. The production of coal was 120,155,918 net tons. The number of lives lost was 497 or 2.78 per 1,000 employes. The number of lives lost per 1,000,000 tons produced was 4.14, and for every life lost 214,763 tons were produced.

In 1899 the number of employes inside and outside the anthracite mines of Pennsylvania was 140,604. The production of coal was 60,518,331 tons. The number of lives lost was 461 or 3.28 per 1,000 employes. The number of lives lost per 1,000,000 tons produced was 7.62, and for every life lost 131,276 tons were produced.

In 1903 the number of employes inside and outside the mines of the United States was 262,688, not including any Pennsylvania mines, an increase of over 47 per cent. over 1899. The production was 178,409,849 tons, an increase of over 48 per cent. The number of lives lost was 832, an increase of over 67 per cent.

In 1903 the number of employes inside and outside the anthracite mines of Pennsylvania was 151,827, an increase of over 7 per cent. over 1899. The production was 75,232,585 tons, an increase of over 24 per cent. The number of lives lost was 518, an increase of over 12 per cent.

In 1908 the number of employes inside and outside the mines of the United States was 334,095, not including any Pennsylvania mines, an increase of over 87 per cent. over 1899. The production was 217,362,080 tons, an increase of over 80 per cent. The number of lives lost was 1,199, an increase of over 141 per cent.

In 1908 the number of employes inside and outside the anthracite mines of Pennsylvania was 174,503, an increase of over 24 per cent. over 1899. The production was 83,543,243 tons, an increase of over 38 per cent. The number of lives lost was 678, an increase of over 47 per cent.

In 1915 the number of employes inside and outside the mines of the United States, not including any Pennsylvania mines, was 393,000, an increase of over 120 per cent. over 1899. The production was 271,000,000 tons, an increase of over 125 per cent. The number of lives lost was 1,236, an increase of over 149 per cent.

In 1915 the number of employes inside and outside the anthracite mines of Pennsylvania was 177,339, an increase of over 27 per cent. over 1899. The production was 89,377,706 tons, an increase of over 47 per cent. The number of lives lost was 588, an increase of over 27 per cent.

During the seventeen years, 1899-1915, inclusive, the number of employes inside and outside the mines of the United States, not including any Pennsylvania mines, was 5,602,421. The production was approximately 3,701,741,947 tons. The number of lives lost was 20,302 or 3.62 per 1,000 employes and 5.48 per 1,000,000 tons produced. The production per life lost was 182,334 tons.

During the same period, the number of employes in the anthracite mines of Pennsylvania was 2,792,435. The production was 1,306,976,649 tons. The number of lives lost was 9,665 or 3.46 per 1,000 employes and 7.39 per 1,000,000 tons produced. The production per life lost was 135,228 tons.

If the fatal accidents in the anthracite mines of Pennsylvania had averaged the same as in the United States, the number would have been 10,109 instead of 9,665, an increase of 444 accidents. If the fatal accidents in the United States had averaged the same as in Pennsylvania, the number would have been 19,384 instead of 20,302, a decrease of 918.

Comparative Table of Accidents, 1899-1915, Inclusive

| Years | United States | | | | | | Pennsylvania | | | | | |
|----------------------------|---------------|-----------|-----------------|--------------------------------|--|--------------------------|---------------|-----------|-----------------|--------------------------------|--|--------------------------|
| | Production | Employees | Fatal accidents | Lives lost per 1,000 employees | Lives lost per 1,000,000 tons produced | Production per life lost | Production | Employees | Fatal accidents | Lives lost per 1,000 employees | Lives lost per 1,000,000 tons produced | Production per life lost |
| 1899, | 130,155,918 | 178,526 | 497 | 2.78 | 4.14 | 214,753 | 60,518,331 | 140,604 | 461 | 3.28 | 7.62 | 131,276 |
| 1900, | 133,002,269 | 195,922 | 816 | 4.16 | 6.13 | 162,993 | 57,363,396 | 143,824 | 411 | 2.86 | 7.16 | 139,570 |
| 1901, | 145,290,915 | 220,392 | 735 | 3.33 | 5.06 | 197,075 | 67,094,665 | 147,651 | 513 | 3.47 | 7.65 | 130,789 |
| 1902, | 161,720,382 | 234,447 | 1,139 | 4.86 | 7.04 | 141,985 | 41,340,935 | 148,139 | 300 | 2.03 | 7.26 | 137,803 |
| 1903, | 178,409,849 | 262,688 | 832 | 3.17 | 4.67 | 214,435 | 75,232,585 | 151,827 | 518 | 3.41 | 6.89 | 145,237 |
| 1904, | 178,621,862 | 276,616 | 873 | 3.16 | 4.89 | 204,607 | 73,594,369 | 161,330 | 595 | 3.69 | 8.08 | 123,688 |
| 1905, | 194,714,101 | 292,840 | 1,109 | 3.79 | 5.70 | 175,576 | 78,647,020 | 168,254 | 644 | 3.83 | 8.19 | 122,123 |
| 1906, | 212,484,779 | 301,677 | 1,082 | 3.29 | 5.09 | 196,381 | 72,139,510 | 166,175 | 557 | 3.85 | 7.72 | 129,514 |
| 1907, | 244,747,965 | 328,597 | 1,683 | 5.12 | 6.88 | 146,424 | 86,066,412 | 168,774 | 708 | 4.20 | 8.45 | 124,546 |
| 1908, | 244,365,068 | 334,095 | 1,299 | 3.89 | 5.22 | 181,286 | 85,943,243 | 171,303 | 628 | 3.61 | 8.25 | 123,290 |
| 1909, | 263,141,322 | 369,439 | 1,765 | 4.58 | 6.32 | 155,319 | 83,683,994 | 168,175 | 567 | 3.31 | 7.07 | 141,488 |
| 1910, | 263,141,322 | 373,357 | 1,505 | 4.64 | 5.72 | 174,827 | 90,917,176 | 173,338 | 689 | 4.03 | 7.18 | 139,067 |
| 1911, | 289,209,219 | 364,922 | 1,313 | 3.60 | 4.54 | 220,566 | 84,436,869 | 175,088 | 601 | 3.43 | 7.12 | 140,477 |
| 1912, | 382,422 | 382,422 | 1,550 | 4.05 | 5.07 | 197,068 | 91,626,964 | 175,310 | 624 | 3.56 | 6.81 | 146,838 |
| 1913, | 305,455,502 | 382,425 | 1,560 | 3.83 | 5.27 | 189,795 | 91,189,641 | 180,899 | 600 | 3.32 | 6.58 | 151,982 |
| 1914, | 272,925,829 | 365,811 | 1,448 | 3.83 | 5.27 | 189,795 | 89,377,706 | 177,339 | 588 | 3.32 | 6.58 | 152,003 |
| 1915, | *271,000,000 | *293,000 | *1,236 | 3.15 | 4.56 | 219,256 | | | | | | |
| Totals and averages, | 3,701,741,947 | 5,602,421 | 20,302 | 3.67 | 5.48 | 182,334 | 1,306,976,649 | 2,792,435 | 9,665 | 3.46 | 7.39 | 135,228 |

*Estimated.

Total production in tons of 2,000 pounds, employes, fatalities, ratio killed per 1,000 employes and the production per life lost in the coal mines of each State in the Union, 1914

| | Production in tons of 2,000 pounds | Employes inside and outside | Fatal accidents inside and outside | Lives lost per 1,000 employes | Production per life lost |
|-----------------------------------|------------------------------------|-----------------------------|------------------------------------|-------------------------------|--------------------------|
| Pennsylvania Bituminous, | 145,884,530 | 196,038 | 413 | 2.11 | 353,231 |
| Pennsylvania Anthracite, | 91,189,641 | 180,839 | 600 | 3.32 | 151,982 |
| West Virginia, | 71,707,626 | 78,963 | 556 | 7.04 | 128,971 |
| Illinois, | 57,589,197 | 79,499 | 193 | 2.43 | 298,390 |
| Kentucky, | 20,382,763 | 28,764 | 61 | 2.12 | 334,144 |
| Ohio, | 18,843,115 | 45,401 | 64 | 1.41 | 294,424 |
| Indiana, | 16,641,132 | 23,175 | 44 | 1.90 | 378,208 |
| Alabama, | 15,593,422 | 24,042 | 128 | 5.32 | 121,824 |
| Colorado, | 8,170,559 | 10,098 | 75 | 7.43 | 108,941 |
| Virginia, | 7,959,535 | 9,183 | 27 | 2.94 | 294,738 |
| Iowa, | 7,451,022 | 16,067 | 37 | 2.30 | 201,379 |
| Kansas, | 6,860,988 | 12,448 | 33 | 2.65 | 207,909 |
| Wyoming, | 6,475,293 | 8,117 | 51 | 6.28 | 126,967 |
| Tennessee, | 5,943,258 | 10,116 | 26 | 2.57 | 228,537 |
| Maryland, | 4,133,547 | 5,403 | 18 | 3.33 | 229,642 |
| Oklahoma, | 3,988,613 | 8,078 | 31 | 3.84 | 128,665 |
| Missouri, | 3,935,980 | 9,549 | 19 | 1.99 | 207,157 |
| New Mexico, | 3,877,689 | 4,178 | 18 | 4.31 | 215,427 |
| Utah, | 3,103,036 | 4,112 | 22 | 5.35 | 141,047 |
| Washington, | 3,064,820 | 5,805 | 17 | 2.93 | 180,284 |
| Montana, | 2,805,173 | 3,350 | 8 | 2.39 | 350,647 |
| Texas, | 2,323,773 | 4,635 | 11 | 2.37 | 211,252 |
| Arkansas, | 1,836,540 | 4,339 | 11 | 2.54 | 166,958 |
| Michigan, | 1,283,030 | 2,800 | 2 | .71 | 641,515 |
| North Dakota, | 506,685 | 558 | 3 | 5.38 | 168,895 |
| Georgia and North Carolina, | 166,498 | 355 | 1 | 2.82 | 166,498 |
| Oregon, | 51,558 | 190 | 1 | 5.26 | 51,558 |
| California and Alaska, | 11,692 | 36 | ..... | ..... | ..... |
| Totals and averages, | 511,780,715 | 776,188 | 2,470 | 3.18 | 307,199 |

Note.—The Department points with pride to the record of only 2.11 lives lost for every 1,000 employes. This is an unusually good record. The production of 353,231 tons per fatal accident is also especially good as compared with the record of any other state of the Union or with any other country.

The Pennsylvania production of anthracite and bituminous coal was 237,074,171 tons, or about 46 per cent. of the total production in the United States, and only about 6,000,000 tons less than the production of Great Britain.

The employes in the mines of Pennsylvania comprise a fraction less than 50 per cent. of the total number of inside employes in the United States, while the fatalities numbered 1,013 out of a total of 2,470, or about 41 per cent.

Table showing companies that had fatal accidents inside or outside their mines; causes of accidents; fatalities per 1,000 employees, and per 1,000,000 tons produced, 1915

| Companies | Production net tons | Employees inside | Causes of Fatal Accidents Inside | | | | Total fatal accidents inside | Fatalities inside per 1,000 employees | Fatalities inside per 1,000,000 tons produced | Employees outside | Causes of Fatal Accidents Outside | | | | Total fatal accidents outside | Grand total fatal accidents inside and outside | Grand total employees | Fatalities inside and outside per 1,000 employees | Fatalities inside and outside per 1,000,000 tons produced |
|--|---------------------|------------------|----------------------------------|-------|-------|----------------------|------------------------------|---------------------------------------|---|-------------------|-----------------------------------|-----------|-------------|----------------------|-------------------------------|--|-----------------------|---|---|
| | | | Falls | Cars | Gas | Miscellaneous causes | | | | | Cars | Machinery | Electricity | Miscellaneous causes | | | | | |
| Philadelphia and Reading Coal and Iron Company, | 11,033,100 | 17,707 | 35 | 15 | 6 | 13 | 69 | 3.90 | 6.25 | 7,220 | 3 | 1 | ..... | .... | 4 | 73 | 24,927 | 2.92 | 6.62 |
| Delaware, Lackawanna and Western Railroad Company, | 10,251,000 | 17,148 | 31 | 9 | 2 | 12 | 54 | 3.15 | 5.91 | 3,362 | 1 | 2 | ..... | 1 | 4 | 58 | 20,510 | 2.83 | 5.66 |
| Delaware and Hudson Company, | 8,551,500 | 11,542 | 43 | 13 | 16 | 17 | 79 | 4.91 | 7.30 | 4,136 | 1 | ..... | ..... | 1 | 8 | 80 | 15,789 | 4.58 | 8.12 |
| Lehigh Valley Coal Company, | 8,551,315 | 11,542 | 19 | 8 | 16 | 17 | 50 | 5.20 | 7.00 | 4,136 | 1 | ..... | ..... | 2 | 1 | 67 | 15,789 | 4.58 | 7.81 |
| Lehigh Valley Coal Company, | 6,102,517 | 9,088 | 20 | 8 | 1 | 7 | 36 | 3.96 | 5.90 | 3,674 | 1 | ..... | ..... | 1 | 3 | 39 | 11,762 | 3.77 | 6.39 |
| Lehigh and Wilkes-Barre Coal Company, | 5,915,488 | 8,290 | 15 | 4 | 3 | 15 | 37 | 4.48 | 6.25 | 3,241 | 1 | ..... | ..... | 1 | 3 | 39 | 10,001 | 3.77 | 6.76 |
| Susquehanna Coal Company, | 5,000,351 | 8,792 | 11 | 3 | ..... | 8 | 22 | 2.50 | 4.39 | 3,762 | 3 | ..... | ..... | ..... | 7 | 25 | 12,554 | 1.99 | 4.99 |
| Lehigh Coal and Navigation Company, | 4,586,022 | 5,645 | 4 | 1 | 1 | 13 | 19 | 3.37 | 4.14 | 2,507 | 2 | 1 | ..... | 4 | 7 | 26 | 8,152 | 3.19 | 5.67 |
| Seranton Coal Company, | 1,902,590 | 1,918 | 4 | ..... | ..... | 2 | 6 | 3.13 | 11.07 | 1,315 | 1 | ..... | ..... | ..... | 1 | 10 | 2,785 | 5.59 | 11.55 |
| Coxe Brothers Company, Incorporated, | 1,896,182 | 1,646 | 4 | 1 | ..... | 1 | 6 | 3.64 | 3.32 | 779 | ..... | ..... | ..... | 2 | 4 | 11 | 5,634 | 3.03 | 5.26 |
| Hillside Coal and Iron Company, | 1,726,400 | 2,772 | 2 | 4 | ..... | 15 | 11 | 3.97 | 6.37 | 802 | ..... | ..... | ..... | ..... | ..... | 11 | 5,634 | 3.03 | 6.37 |
| Kingston Coal Company, | 1,285,013 | 2,163 | 6 | 2 | ..... | ..... | 9 | 4.16 | 6.45 | 634 | ..... | ..... | ..... | ..... | ..... | 9 | 5,634 | 3.19 | 6.45 |
| A. Fardoe and Company, | 711,064 | 1,663 | 1 | ..... | ..... | ..... | 1 | 2.65 | 6.41 | 488 | ..... | ..... | ..... | ..... | ..... | 1 | 5,634 | 3.19 | 6.45 |
| Vorley Coal Company, | 617,015 | 1,024 | 1 | ..... | ..... | ..... | 4 | 4.25 | 6.18 | 278 | ..... | ..... | ..... | 1 | ..... | 1 | 5,634 | 3.19 | 6.45 |
| West Virginia Coal Company, | 617,015 | 1,024 | 1 | ..... | ..... | ..... | 4 | 4.25 | 6.18 | 278 | ..... | ..... | ..... | 1 | ..... | 1 | 5,634 | 3.19 | 6.45 |
| Price Brothers Company, Incorporated, | 617,015 | 1,024 | 1 | ..... | ..... | ..... | 4 | 4.25 | 6.18 | 278 | ..... | ..... | ..... | 1 | ..... | 1 | 5,634 | 3.19 | 6.45 |
| Temple Coal Company, | 617,015 | 1,024 | 1 | ..... | ..... | ..... | 4 | 4.25 | 6.18 | 278 | ..... | ..... | ..... | 1 | ..... | 1 | 5,634 | 3.19 | 6.45 |
| Price-Pancoat Coal Company, | 568,710 | 923 | 3 | ..... | ..... | ..... | 2 | 3.25 | 4.76 | 290 | ..... | ..... | ..... | ..... | ..... | 3 | 1,383 | 2.64 | 4.80 |
| Hartleigh-Brookwood Coal Company, | 526,056 | 1,130 | ..... | 1 | ..... | ..... | 3 | 3.91 | 1.76 | 435 | ..... | ..... | ..... | ..... | ..... | 1 | 1,267 | 1.76 | 1.76 |
| Douson Coal Company, | 493,855 | 522 | ..... | ..... | ..... | ..... | 3 | 5.75 | 6.06 | 219 | ..... | ..... | ..... | ..... | ..... | 1 | 1,267 | 3.32 | 7.63 |
| C. M. Dodson and Company, | 439,265 | 483 | 4 | 1 | ..... | ..... | 6 | 12.42 | 13.65 | 251 | ..... | ..... | ..... | ..... | ..... | 7 | 744 | 9.41 | 15.93 |
| Maryd Coal Company, | 414,661 | 375 | 1 | ..... | ..... | ..... | 1 | 2.67 | 2.41 | 178 | ..... | ..... | ..... | ..... | ..... | 1 | 553 | 7.41 | 7.41 |
| Thomas Colliery Company, | 410,847 | 295 | 2 | 1 | ..... | ..... | 3 | 10.17 | 7.30 | 290 | ..... | ..... | ..... | ..... | ..... | 1 | 585 | 5.13 | 7.30 |
| Saint Clair Coal Company, | 410,821 | 383 | 3 | ..... | ..... | ..... | 4 | 11.53 | 9.74 | 348 | ..... | ..... | ..... | ..... | ..... | 1 | 701 | 16.17 | 16.17 |
| Mont Lookout Coal Company, | 389,877 | 603 | ..... | ..... | ..... | ..... | 1 | 1.50 | 7.50 | 138 | ..... | ..... | ..... | ..... | ..... | 1 | 850 | 3.51 | 7.50 |
| Lyle Coal Company, | 377,375 | 289 | 2 | ..... | ..... | ..... | 1 | 5.12 | 5.30 | 268 | ..... | ..... | ..... | ..... | ..... | 1 | 855 | 3.51 | 7.50 |
| Lehigh Mountain Coal Company, | 377,375 | 289 | 2 | ..... | ..... | ..... | 1 | 5.12 | 5.30 | 268 | ..... | ..... | ..... | ..... | ..... | 1 | 855 | 3.51 | 7.50 |
| Alton Coal Company, | 369,481 | 588 | 1 | ..... | ..... | ..... | 2 | 3.40 | 5.44 | 193 | ..... | ..... | ..... | ..... | ..... | 3 | 781 | 4.58 | 5.44 |

Table showing number of employes inside between 16 and 21 years, and number of employes outside between 14 and 21 years, 1915

| Districts | Inside Employes | | | Outside Employes | | | Grand total |
|---------------------|-------------------------|---------------|---------|-------------------------|---------------|--------|-------------|
| | Between 16 and 21 years | Over 21 years | Total | Between 14 and 21 years | Over 21 years | Total | |
| First, | 165 | 6,832 | 6,997 | 354 | 1,767 | 2,121 | 9,118 |
| Second, | 225 | 7,197 | 7,422 | 347 | 1,398 | 1,745 | 9,167 |
| Third, | 448 | 5,543 | 5,991 | 462 | 1,216 | 1,678 | 7,669 |
| Fourth, | 298 | 6,713 | 7,011 | 405 | 1,258 | 1,663 | 8,674 |
| Fifth, | 256 | 4,864 | 5,120 | 451 | 1,070 | 1,521 | 6,641 |
| Sixth, | 426 | 9,496 | 9,922 | 569 | 2,031 | 2,600 | 12,522 |
| Seventh, | 677 | 8,415 | 9,092 | 413 | 1,958 | 2,371 | 11,463 |
| Eighth, | 504 | 6,245 | 6,749 | 406 | 1,567 | 1,973 | 8,722 |
| Ninth, | 512 | 7,456 | 7,968 | 418 | 1,753 | 2,171 | 10,139 |
| Tenth, | 663 | 7,783 | 8,446 | 655 | 1,913 | 2,568 | 11,014 |
| Eleventh, | 520 | 7,075 | 7,595 | 758 | 3,190 | 3,948 | 11,543 |
| Twelfth, | 401 | 4,358 | 4,759 | 660 | 1,344 | 2,004 | 6,763 |
| Thirteenth, | 328 | 4,127 | 4,455 | 635 | 1,873 | 2,508 | 6,963 |
| Fourteenth, | 287 | 4,116 | 4,403 | 621 | 1,827 | 2,448 | 6,851 |
| Fifteenth, | 315 | 4,539 | 4,854 | 592 | 1,521 | 1,820 | 6,724 |
| Sixteenth, | 433 | 4,904 | 5,337 | 616 | 1,500 | 2,115 | 7,462 |
| Seventeenth, | 107 | 6,299 | 6,406 | 180 | 2,766 | 2,946 | 9,352 |
| Eighteenth, | 290 | 4,123 | 4,413 | 533 | 1,406 | 1,939 | 6,352 |
| Nineteenth, | 293 | 4,696 | 4,989 | 549 | 1,853 | 2,402 | 7,391 |
| Twentieth, | 409 | 3,886 | 4,295 | 417 | 1,124 | 1,541 | 5,836 |
| Twenty-first, | 288 | 4,734 | 5,022 | 382 | 1,560 | 1,951 | 6,973 |
| Totals, | 7,845 | 123,451 | 131,296 | 10,421 | 35,620 | 46,041 | 177,337 |

Note.—Of the 7,845 minors between the ages of 16 and 21 years employed inside the mines, 39 or 4.97 per 1,000 were killed, an average loss of life much greater than the general average per 1,000 inside employes, which was only 4.01. There is no excuse for this great loss of life, the result undoubtedly of lack of discipline on the part of those in charge of the mines and of indiscretion and carelessness on the part of the victims.

Of the 10,421 minors between the ages of 14 and 21 years employed outside the mines, 12 or 1.15 per 1,000 were killed. Although this is a low average, it is entirely too high for surface fatalities and the cause is the same as stated for the inside employes.

Nationality of Inside Employees, by Districts, 1915

| Nationalities Inside | First | Second | Third | Fourth | Fifth | Sixth | Seventh | Eighth | Ninth | Tenth | Eleventh | Twelfth | Thirteenth | Fourteenth | Fifteenth | Sixteenth | Seventeenth | Eighteenth | Nineteenth | Twentieth | Twenty-first | Totals inside |
|----------------------|-------|--------|-------|--------|-------|-------|---------|--------|-------|--------|----------|---------|------------|------------|-----------|-----------|-------------|------------|------------|-----------|--------------|---------------|
| American, | 1,889 | 1,735 | 734 | 931 | 1,005 | 1,794 | 1,616 | 1,019 | 1,640 | 2,281 | 1,924 | 1,465 | 1,142 | 1,917 | 1,877 | 2,400 | 2,042 | 790 | 1,485 | 3,503 | 673 | 33,895 |
| English, | 337 | 271 | 124 | 165 | 218 | 218 | 210 | 143 | 1,032 | 2,372 | 1,586 | 1,800 | 55 | 40 | 40 | 44 | 79 | 39 | 99 | 27 | 126 | 2,857 |
| Welsh, | 248 | 570 | 171 | 293 | 212 | 139 | 404 | 180 | 629 | 552 | 70 | 55 | 38 | 48 | 41 | 41 | 101 | 22 | 10 | 24 | 102 | 3,422 |
| Irish, | 45 | 232 | 37 | 1 | 32 | 110 | 18 | 27 | 10 | 352 | 8 | 8 | 7 | 3 | 4 | 8 | 16 | 5 | 5 | 3 | 12 | 419 |
| Prussian, | 302 | 332 | 437 | 346 | 191 | 401 | 277 | 223 | 330 | 96 | 316 | 54 | 42 | 176 | 69 | 40 | 74 | 41 | 163 | 15 | 129 | 4,015 |
| German, | 65 | 118 | 131 | 65 | 54 | 137 | 108 | 110 | 135 | 552 | 1,219 | 1,933 | 24 | 101 | 83 | 103 | 74 | 19 | 41 | 37 | 50 | 1,939 |
| Slovakian, | 258 | 165 | 699 | 174 | 168 | 560 | 317 | 605 | 498 | 665 | 1,219 | 1,933 | 24 | 101 | 83 | 103 | 74 | 19 | 41 | 118 | 390 | 8,983 |
| Italian, | 973 | 132 | 659 | 409 | 823 | 2,299 | 2,551 | 1,008 | 79 | 539 | 887 | 1,114 | 70 | 189 | 264 | 315 | 223 | 193 | 560 | 118 | 339 | 10,463 |
| Polish, | 1,293 | 1,444 | 1,291 | 1,185 | 1,281 | 1,917 | 1,878 | 1,458 | 2,282 | 4,556 | 1,382 | 832 | 1,031 | 336 | 827 | 917 | 673 | 521 | 375 | 182 | 367 | 26,734 |
| Hungarian, | 130 | 181 | 262 | 166 | 38 | 239 | 41 | 58 | 35 | 100 | 312 | 26 | 112 | 31 | 242 | 31 | 378 | 274 | 239 | 198 | 711 | 7,468 |
| Austrian, | 421 | 246 | 222 | 37 | 262 | 479 | 550 | 261 | 403 | 669 | 276 | 70 | 239 | 325 | 336 | 590 | 312 | 276 | 439 | 1 | 4 | 397 |
| Svedish, | 4 | 5 | 1 | 23 | 33 | 33 | 30 | 1 | 43 | 806 | 358 | 281 | 137 | 534 | 666 | 575 | 306 | 269 | 439 | 70 | 401 | 10,205 |
| Russian, | 956 | 666 | 488 | 445 | 561 | 389 | 1,057 | 346 | 483 | 806 | 358 | 281 | 137 | 534 | 666 | 575 | 306 | 269 | 439 | 70 | 401 | 10,205 |
| Belgian, | 1 | 1 | 2 | 1 | 2 | 2 | 40 | 40 | 1 | 1 | 3 | 4 | 9 | 17 | 17 | 17 | 3 | 3 | 1 | 1 | 1 | 31 |
| Bohemian, | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 4 | 9 | 17 | 17 | 17 | 3 | 3 | 1 | 1 | 1 | 31 |
| French, | 4 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Spanish, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Croatian, | 108 | 1,047 | 610 | 212 | 158 | 1,005 | 1,307 | 973 | 1,104 | 765 | 298 | 1,317 | 1,045 | 537 | 331 | 109 | 314 | 539 | 709 | 66 | 225 | 12,920 |
| Lithuanian, | 3 | 9 | 5 | 1 | 14 | 9 | 5 | 5 | 4 | 6 | 84 | 58 | 105 | 32 | 4 | 6 | 143 | 220 | 33 | 38 | 47 | 883 |
| Greek, | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 192 | 2 | 2 | 3 | 111 | 6 | 88 | 218 | 62 | ..... | ..... | ..... |
| Tyrolese, | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 | 2 | 2 | 3 | 111 | 6 | 88 | 218 | 62 | ..... | ..... | ..... |
| Danish, | 7 | 7 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 19 | ..... | ..... | ..... |
| Croatian, | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 16 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 19 | ..... | ..... | ..... |
| Syrian, | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 16 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 19 | ..... | ..... | ..... |
| Montenegrin, | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 16 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 19 | ..... | ..... | ..... |
| Horvat, | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 16 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 19 | ..... | ..... | ..... |
| Magyar, | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 16 | 9 | 4 | 4 | 4 | 4 | 4 | 4 | 19 | ..... | ..... | ..... |
| Totals inside, | 7,065 | 6,797 | 5,991 | 4,111 | 5,121 | 9,922 | 8,166 | 6,752 | 8,063 | 11,391 | 7,725 | 4,740 | 4,134 | 4,422 | 4,961 | 5,329 | 6,387 | 2,592 | 4,971 | 4,240 | 4,594 | 128,352 |

Nationality of Outside Employees, by Districts, 1915

| Nationalities Outside | First | Second | Third | Fourth | Fifth | Sixth | Seventh | Eighth | Ninth | Tenth | Eleventh | Twelfth | Thirteenth | Fourteenth | Fifteenth | Sixteenth | Seventeenth | Eighteenth | Nineteenth | Twentieth | Twenty-first | Totals outside |
|--|-------|--------|-------|--------|-------|--------|---------|--------|--------|--------|----------|---------|------------|------------|-----------|-----------|-------------|------------|------------|-----------|--------------|----------------|
| American, | 1,179 | 967 | 489 | 476 | 552 | 1,136 | 969 | 896 | 1,185 | 1,873 | 1,811 | 1,285 | 1,300 | 1,627 | 1,115 | 1,597 | 1,462 | 766 | 1,462 | 1,316 | 836 | 24,389 |
| English, | 32 | 60 | 17 | 17 | 65 | 73 | 35 | 45 | 56 | 116 | 36 | 30 | 52 | 24 | 12 | 35 | 21 | 7 | 18 | 11 | 73 | 907 |
| Welsh, | 11 | 20 | 30 | 23 | 43 | 33 | 42 | 60 | 148 | 42 | 22 | 15 | 29 | 17 | 13 | 13 | 18 | 5 | 12 | 6 | 68 | 670 |
| Scottish, | 10 | 12 | 18 | 4 | 35 | 57 | 10 | 8 | 13 | 1 | 7 | 7 | 29 | 1 | 1 | 4 | 1 | 2 | 6 | 1 | 5 | 215 |
| Irish, | 49 | 77 | 189 | 110 | 96 | 82 | 110 | 77 | 74 | 32 | 98 | 28 | 19 | 131 | 33 | 10 | 31 | 19 | 47 | 5 | 69 | 1,396 |
| German, | 23 | 27 | 47 | 22 | 16 | 36 | 46 | 22 | 61 | 162 | 138 | 128 | 56 | 31 | 28 | 29 | 22 | 131 | 30 | 12 | 49 | 278 |
| Slavonian, | 56 | 60 | 133 | 5 | 20 | 137 | 90 | 214 | 131 | 110 | 453 | 43 | 54 | 36 | 56 | 30 | 29 | 131 | 24 | 66 | 278 | 3,091 |
| Italian, | 292 | 50 | 949 | 72 | 121 | 484 | 13 | 133 | 46 | 572 | 208 | 137 | 155 | 263 | 57 | 30 | 27 | 140 | 73 | 15 | 362 | 3,786 |
| Polish, | 10 | 16 | 10 | 10 | 17 | 12 | 13 | 17 | 148 | 135 | 132 | 76 | 45 | 4 | 113 | 32 | 76 | 35 | 159 | 44 | 39 | 3,403 |
| Russian, | 35 | 18 | 6 | 30 | 35 | 17 | 32 | 17 | 132 | 76 | 132 | 76 | 182 | 47 | 99 | 148 | 69 | 139 | 222 | 14 | 101 | 2,668 |
| Austrian, | 147 | 141 | 40 | 42 | 156 | 68 | 209 | 132 | 296 | 334 | 172 | 129 | 182 | 47 | 99 | 148 | 69 | 139 | 222 | 14 | 101 | 2,668 |
| Swedish, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 4 | 56 |
| Belgian, | 174 | 49 | 61 | 51 | 130 | 161 | 169 | 131 | 65 | 164 | 129 | 36 | 35 | 35 | 85 | 50 | 133 | 18 | 70 | 69 | 207 | 1,985 |
| Belorussian, | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 5 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 6 | 21 |
| French, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 16 |
| Canadian, | 2 | 5 | 34 | 2 | 15 | 44 | 21 | 73 | 31 | 71 | 24 | 78 | 79 | 82 | 21 | 15 | 33 | 11 | 33 | 49 | 4 | 673 |
| Lithuanian, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 4 | 30 |
| Greek, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 42 |
| Tyrolean, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 13 |
| Danish, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 32 |
| Scandinavian, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 31 |
| Syrian, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 29 |
| Norwegian, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 |
| Hungarian, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 29 |
| Magyar, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 29 |
| Totals outside, | 2,145 | 1,000 | 1,670 | 909 | 1,497 | 2,571 | 1,956 | 1,971 | 2,242 | 3,836 | 3,876 | 1,993 | 2,220 | 2,344 | 1,864 | 2,124 | 2,994 | 1,340 | 2,406 | 1,461 | 1,397 | 45,455 |
| Grand totals inside and outside, | 9,197 | 8,397 | 7,661 | 5,020 | 6,618 | 12,492 | 10,122 | 8,723 | 10,205 | 15,227 | 11,001 | 6,733 | 6,354 | 6,666 | 6,925 | 7,444 | 9,321 | 4,932 | 7,376 | 5,801 | 6,991 | 173,907 |

Note.—In the tables of nationalities of employees, the number of English speaking employees who are classed as American, English, Welsh, Scotch, Irish and German, was 75,336, while all other nationalities aggregated 38,571.

TABLE 1.—Number of minor children killed inside and outside the mines, 1915

| Districts | Inside | | | | | Outside | | | | | Grand totals inside and outside |
|---------------------|---------------|---------------|---------------|---------------|---------------|---------|---------------|---------------|---------------|---------------|---------------------------------|
| | Boys 20 years | Boys 19 years | Boys 18 years | Boys 17 years | Boys 16 years | Totals | Boys 14 years | Boys 15 years | Boys 16 years | Boys 17 years | Totals |
| First, | 1 | 3 | 1 | 1 | 1 | 7 | 1 | 1 | 1 | 1 | 16 |
| Second, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Third, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Fourth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Fifth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Sixth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Seventh, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Eighth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Ninth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Tenth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Eleventh, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Twelfth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Thirteenth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Fourteenth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Fifteenth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Sixteenth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Seventeenth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Eighteenth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Nineteenth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Twentieth, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Twenty-first, | 1 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 11 |
| Totals, | 7 | 14 | 17 | 2 | 1 | 39 | 3 | 1 | 4 | 1 | 51 |

TABLE 2.—Fatal accidents inside the mines, production, employees, fatalities per 1,000 employed, production per fatality, fatalities per 1,000,000 tons produced, by counties, 1915

| Counties | Fatal Accidents Inside | | | | | Production in tons of 2,000 pounds | Employees inside | Lives lost inside per 1,000 employees | Tons of coal produced per life lost inside | Lives lost inside per 1,000,000 tons produced |
|----------------------------------|------------------------|---------|----------------------|-------------------------|--------|------------------------------------|------------------|---------------------------------------|--|---|
| | By falls | By cars | By explosions of gas | By miscellaneous causes | Totals | | | | | |
| Luzerne, | 103 | 34 | 17 | 61 | 215 | 35,266,086 | 50,950 | 4.22 | 164,028 | 6.10 |
| Lackawanna, | 82 | 22 | 11 | 72 | 187 | 21,697,563 | 34,488 | 4.03 | 156,098 | 6.41 |
| Schuylkill, | 50 | 17 | 9 | 33 | 109 | 19,078,139 | 26,111 | 4.17 | 175,029 | 5.71 |
| Northumberland, | 33 | 3 | 2 | 10 | 48 | 6,354,484 | 10,768 | 3.53 | 167,213 | 5.98 |
| Totals and averages, | 258 | 76 | 31 | 136 | 501 | 82,396,272 | 122,317 | 4.10 | 161,464 | 6.08 |
| Carbon, | 3 | 1 | 1 | 7 | 11 | 3,237,156 | 4,022 | 2.73 | 503,378 | 2.40 |
| Columbia, | 1 | 1 | 1 | 1 | 4 | 1,362,465 | 1,354 | 3.60 | 300,616 | 3.33 |
| Dauphin, | 1 | 1 | 1 | 1 | 4 | 972,110 | 1,716 | 1.75 | 234,037 | 3.79 |
| Susquehanna, | 1 | 1 | 1 | 1 | 4 | 700,076 | 1,110 | 3.69 | 150,019 | 5.26 |
| Sullivan, | 3 | 1 | 1 | 3 | 8 | 604,353 | 716 | 4.19 | 201,451 | 4.96 |
| Wayne, | 1 | 1 | 1 | 1 | 4 | 105,274 | 71 | 11.08 | 105,274 | 9.50 |
| Totals and averages, | 10 | 5 | 2 | 9 | 26 | 6,881,434 | 8,979 | 2.90 | 268,517 | 3.72 |
| Grand totals and averages, | 268 | 81 | 33 | 145 | 527 | 89,277,706 | 131,296 | 4.01 | 169,597 | 5.90 |

TABLE 3.—Nationality by birth of employees killed by falls, 1915

| Nationality | Districts | | | | | | | | | | | | | | | | | | | | | | Percentages |
|-------------|-----------|--------|-------|--------|-------|-------|---------|--------|-------|-------|----------|---------|------------|------------|-----------|-----------|-------------|------------|------------|-----------|--------------|--------|-------------|
| | First | Second | Third | Fourth | Fifth | Sixth | Seventh | Eighth | Ninth | Tenth | Eleventh | Twelfth | Thirteenth | Fourteenth | Fifteenth | Sixteenth | Seventeenth | Eighteenth | Nineteenth | Twentieth | Twenty-first | Totals | |
| American, | 2 | 1 | 1 | 2 | ... | 1 | ... | ... | 2 | 1 | 4 | 1 | 1 | 1 | 2 | 4 | 1 | 1 | 2 | 7 | ... | 33 | |
| English, | 1 | ... | ... | 1 | ... | ... | ... | ... | 1 | 2 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 4 | |
| Welsh, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 5 | |
| Scottish, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | |
| Irish, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 9 | |
| German, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | |
| Polish, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | |
| Italian, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | |
| Slavonian, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | |
| Lithuanian, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | |
| Austrian, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | |
| Russian, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 13 | |
| Greek, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 4 | |
| Mexican, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | |
| Hungarian, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | |
| Totals, | 27 | 16 | 12 | 17 | 12 | 24 | 18 | 13 | 21 | 11 | 13 | 6 | 14 | 7 | 10 | 13 | 6 | 9 | 13 | 7 | 12 | 288 | |
| | | | | | | | | | | | | | | | | | | | | | | 100.00 | |

Note.—The table of nationalities of inside employees, printed in this report, shows that the so-called English speaking employees, including Americans, English, Welsh, Scotch, Irish and Germans, number 46,767 or 36.44 per cent. of the total number of inside employees, while the other nationalities number 81,555 or 63.56 per cent.

Table 3 shows that 268 lives were lost inside through falls, 69 or 22.4 per cent. of these accidents were among the English speaking employees and 203 or 77.6 per cent. were among the other employees. A statement that a higher percentage of fatalities occurred among the non-English speaking employees is made merely to give the facts, as it is possible that a larger percentage of the non-English speaking employees were working at the face, mining coal, while the English speaking employees were doing other kinds of inside work.

TABLE 4.—Nationality by birth of employes killed by falls, 1915

| Districts | Non English Speaking Employes | | | | | Totals | English Speaking Employes* | | | | | Totals | Grand totals |
|---------------------|----------------------------------|-----------------------------------|---|---|----------------------------|--------|-------------------------------|-----------------------------------|---|--|---|--------|--------------|
| | By falls at or near face | By falls while taking out pillars | By falls on gangway while timbering and repairing | By falls on gangway while timbering and repairing | By falls in cross headings | | By falls at or near face | By falls while taking out pillars | By falls on gangway while timbering and repairing | By falls on gangway while riding on cars | By falls on slope while timbering and repairing | | |
| First, | 10 | 7 | 1 | ..... | ..... | 18 | 3 | ..... | ..... | ..... | ..... | 3 | 21 |
| Second, | 13 | ..... | 1 | ..... | ..... | 15 | 1 | ..... | ..... | ..... | ..... | 1 | 16 |
| Third, | 13 | ..... | ..... | ..... | ..... | 7 | ..... | ..... | 1 | ..... | ..... | 5 | 12 |
| Fourth, | 12 | 1 | ..... | ..... | ..... | 13 | 3 | 1 | ..... | ..... | ..... | 4 | 17 |
| Fifth, | 3 | ..... | 1 | ..... | ..... | 9 | 1 | 1 | 1 | ..... | ..... | 3 | 12 |
| Sixth, | 17 | 1 | ..... | ..... | ..... | 18 | 6 | ..... | ..... | ..... | ..... | 6 | 24 |
| Seventh, | 15 | 2 | ..... | ..... | ..... | 17 | ..... | 1 | ..... | ..... | ..... | 1 | 18 |
| Eighth, | 11 | 1 | ..... | 1 | ..... | 13 | ..... | ..... | ..... | ..... | ..... | ..... | 13 |
| Ninth, | 14 | ..... | ..... | ..... | 1 | 15 | 4 | ..... | 1 | ..... | 1 | 6 | 21 |
| Tenth, | 6 | 1 | 1 | ..... | ..... | 8 | 1 | ..... | 1 | ..... | ..... | 1 | 11 |
| Eleventh, | 2 | 6 | ..... | ..... | ..... | 9 | 4 | ..... | ..... | ..... | ..... | 2 | 13 |
| Twelfth, | 3 | ..... | 1 | ..... | ..... | 4 | 1 | 1 | ..... | ..... | ..... | 2 | 6 |
| Thirteenth, | 10 | ..... | ..... | ..... | ..... | 13 | 1 | ..... | ..... | ..... | ..... | 1 | 14 |
| Fourteenth, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | 1 |
| Fifteenth, | 5 | ..... | ..... | ..... | 1 | 8 | ..... | ..... | ..... | ..... | ..... | 2 | 10 |
| Sixteenth, | 4 | ..... | 1 | ..... | ..... | 8 | ..... | 3 | ..... | ..... | ..... | 5 | 13 |
| Seventeenth, | 3 | ..... | 1 | ..... | ..... | 4 | 1 | ..... | ..... | ..... | ..... | 1 | 5 |
| Eighteenth, | 3 | ..... | 1 | ..... | 1 | 7 | ..... | ..... | ..... | ..... | ..... | 2 | 9 |
| Nineteenth, | 7 | 3 | 1 | ..... | ..... | 11 | ..... | ..... | ..... | ..... | ..... | 2 | 13 |
| Twentieth, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3 | 4 | ..... | ..... | ..... | 7 | 7 |
| Twenty-first, | 10 | 1 | ..... | ..... | ..... | 11 | 1 | ..... | ..... | ..... | ..... | 1 | 12 |
| Totals, | 151 | 42 | 9 | 1 | 2 | 205 | 38 | 18 | 4 | ..... | 2 | 60 | 268 |

*English speaking employes including Americans, English, Scotch, Irish, Welsh and Germans.

TABLE 5.—Fatal accidents, production, employees, fatalities inside per 1,000,000 tons produced, by counties and districts

| Counties and Districts | Employees inside | Production | Falls | Cars | Gas | Explosives | Blasts | Electricity | Falling into shafts, slopes, etc. | Machinery | Miscellaneous causes | Total fatal accidents inside | Fatalities inside per 1,000 employees | Fatalities inside per 1,000,000 tons produced | Employees outside | Fatal accidents outside | Total fatal accidents | Total employees | Fatalities inside and outside per 1,000 employees |
|--|------------------|------------|-------|------|-----|------------|--------|-------------|-----------------------------------|-----------|----------------------|------------------------------|---------------------------------------|---|-------------------|-------------------------|-----------------------|-----------------|---|
| Luzerne, Lackawanna, Susquehanna, Wayne and Sullivan:— | | | | | | | | | | | | | | | | | | | |
| First, | 6,997 | 4,729,612 | 21 | 5 | ... | ... | 4 | ... | 1 | ... | ... | 32 | 4.57 | 6.77 | 2,421 | 6 | 38 | 9,118 | 4.17 |
| Second, | 7,422 | 4,457,375 | 16 | 5 | ... | ... | 6 | ... | 1 | ... | ... | 29 | 3.91 | 6.51 | 1,745 | 4 | 33 | 9,167 | 3.60 |
| Third, | 5,991 | 3,891,912 | 12 | 7 | ... | ... | 1 | ... | 1 | ... | ... | 1 | 4.11 | 4.01 | 6,117 | ... | 2 | 7,069 | 3.39 |
| Fourth, | 7,011 | 4,058,955 | 17 | ... | ... | ... | ... | ... | ... | ... | ... | 15 | 4.11 | 4.13 | 1,063 | ... | ... | 7,069 | 3.39 |
| Fifth, | 5,129 | 3,496,856 | 12 | ... | ... | ... | ... | ... | ... | ... | ... | 15 | 4.11 | 4.13 | 1,063 | ... | ... | 7,069 | 3.39 |
| Sixth, | 3,922 | 3,364,413 | 14 | 8 | ... | ... | 1 | ... | ... | ... | ... | 15 | 4.11 | 4.13 | 1,063 | ... | ... | 7,069 | 3.39 |
| Seventh, | 6,739 | 4,394,063 | 18 | ... | ... | ... | 1 | ... | ... | ... | ... | 15 | 4.11 | 4.13 | 1,063 | ... | ... | 7,069 | 3.39 |
| Eighth, | 7,968 | 5,642,735 | 17 | ... | ... | ... | 1 | ... | ... | ... | ... | 15 | 4.11 | 4.13 | 1,063 | ... | ... | 7,069 | 3.39 |
| Ninth, | 8,446 | 5,619,556 | 21 | 6 | ... | ... | 4 | ... | ... | ... | ... | 24 | 4.84 | 4.27 | 2,568 | 2 | 26 | 11,014 | 2.38 |
| Tenth, | 7,555 | 6,867,759 | 13 | ... | ... | ... | 3 | ... | ... | ... | ... | 22 | 4.10 | 3.20 | 3,943 | 6 | 28 | 11,543 | 2.43 |
| Eleventh, | 5,922 | 3,367,422 | 19 | 6 | ... | ... | 1 | ... | ... | ... | ... | 21 | 4.18 | 6.24 | 1,551 | 1 | 22 | 6,973 | 3.16 |
| Twelfth, | 87,355 | 58,498,959 | 190 | 59 | 20 | 6 | 58 | 1 | 7 | 1 | 20 | 392 | 4.14 | 6.19 | 26,310 | 33 | 385 | 113,615 | 3.48 |
| Totals and averages, | | | | | | | | | | | | | | | | | | | |
| Carbon, Schuylkill, Columbia, Northumberland and Dauphin:— | | | | | | | | | | | | | | | | | | | |
| Twelfth, | 4,759 | 3,635,577 | 6 | 1 | ... | ... | ... | ... | ... | ... | ... | 11 | 2.31 | 2.62 | 2,004 | ... | 11 | 6,763 | 1.63 |
| Thirteenth, | 4,465 | 3,613,359 | 14 | 1 | ... | ... | 1 | ... | 1 | ... | ... | 15 | 2.31 | 2.62 | 2,004 | ... | 20 | 6,983 | 1.63 |
| Fourteenth, | 4,904 | 3,738,465 | 10 | 2 | ... | ... | ... | ... | ... | ... | ... | 15 | 2.31 | 2.62 | 2,004 | ... | 16 | 6,821 | 2.34 |
| Fifteenth, | 5,337 | 3,205,924 | 13 | 1 | ... | ... | 4 | ... | ... | ... | ... | 21 | 3.93 | 6.55 | 2,125 | 1 | 23 | 7,482 | 2.65 |
| Sixteenth, | 6,406 | 5,272,872 | 5 | 1 | ... | ... | ... | 3 | ... | ... | ... | 21 | 3.28 | 3.98 | 2,946 | 7 | 28 | 9,352 | 2.99 |
| Seventeenth, | 4,413 | 3,559,693 | 9 | 3 | ... | ... | 2 | ... | ... | ... | ... | 21 | 4.76 | 5.93 | 1,929 | 4 | 25 | 6,352 | 3.94 |
| Eighteenth, | 4,989 | 3,879,796 | 13 | 5 | ... | ... | 1 | ... | 1 | ... | ... | 25 | 5.01 | 6.44 | 2,402 | 5 | 30 | 7,391 | 4.06 |
| Nineteenth, | 4,295 | 2,302,272 | 7 | ... | ... | ... | ... | ... | ... | ... | ... | 13 | 3.03 | 5.65 | 1,541 | 1 | 14 | 5,836 | 2.40 |
| Twentieth, | | | | | | | | | | | | | | | | | | | |
| Totals and averages, | 43,961 | 30,873,747 | 78 | 22 | 13 | 2 | 11 | 3 | 5 | ... | 31 | 165 | 3.75 | 5.34 | 19,733 | 28 | 193 | 63,694 | 3.03 |
| Grand totals and averages, | 131,296 | 89,377,706 | 268 | 81 | 33 | 8 | 69 | 4 | 12 | 1 | 51 | 527 | 4.09 | 5.90 | 46,043 | 61 | 588 | 177,339 | 3.32 |

TABLE 6.—Fatal accidents, production, employees, fatalities per 1,000 employees, fatalities per 1,000,000 tons produced, by years, 1899-1915, inclusive

| Years | Employees inside | Production net tons | Falls | Cars | Gas | Explosives | Blasts | Electricity | Falling into shafts and slopes, etc. | Machinery | Miscellaneous causes | Total fatal accidents inside | Fatalities inside per 1,000 employees | Fatalities inside per 1,000,000 tons produced | Employees outside | Fatal accidents outside | Total fatal accidents | Total employees | Fatalities inside and outside per 1,000 employees |
|-------------------------|------------------|---------------------|-------|-------|-----|------------|--------|-------------|--------------------------------------|-----------|----------------------|------------------------------|---------------------------------------|---|-------------------|-------------------------|-----------------------|-----------------|---|
| 1899. | 92,167 | 60,518,331 | 226 | 51 | 28 | 11 | 27 | ... | 16 | ... | 30 | 389 | 1.22 | 6.43 | 48,427 | 72 | 461 | 140,091 | 3.88 |
| 1900. | 94,140 | 67,363,286 | 178 | 60 | 38 | 14 | 28 | ... | 19 | ... | 23 | 358 | 1.20 | 6.24 | 49,684 | 78 | 546 | 147,654 | 3.86 |
| 1901. | 98,454 | 67,094,665 | 156 | 69 | 43 | 15 | 36 | ... | 14 | ... | 28 | 345 | 1.19 | 5.91 | 49,782 | 52 | 500 | 148,139 | 3.47 |
| 1902. | 102,057 | 71,339,582 | 126 | 76 | 26 | 17 | 38 | ... | 13 | ... | 23 | 426 | 1.17 | 5.66 | 49,772 | 92 | 518 | 151,827 | 3.41 |
| 1903. | 110,362 | 73,594,389 | 258 | 71 | 30 | 35 | 34 | 1 | 33 | ... | 62 | 496 | 1.49 | 6.74 | 50,968 | 99 | 595 | 161,350 | 3.60 |
| 1904. | 116,371 | 78,617,029 | 265 | 82 | 33 | 16 | 44 | ... | 43 | ... | 36 | 551 | 1.73 | 7.01 | 51,883 | 99 | 614 | 168,251 | 3.83 |
| 1905. | 114,998 | 72,139,510 | 214 | 67 | 43 | 28 | 53 | ... | 20 | ... | 29 | 456 | 1.57 | 6.32 | 51,177 | 101 | 557 | 166,175 | 3.35 |
| 1906. | 117,849 | 86,056,412 | 279 | 88 | 44 | 17 | 70 | ... | 25 | ... | 73 | 601 | 5.10 | 6.98 | 50,925 | 107 | 708 | 168,774 | 4.20 |
| 1907. | 124,232 | 83,643,243 | 284 | 99 | 57 | 23 | 69 | 3 | 22 | 1 | 49 | 596 | 4.79 | 7.13 | 50,270 | 82 | 678 | 174,503 | 3.88 |
| 1908. | 123,272 | 80,222,833 | 254 | 71 | 28 | 22 | 47 | 6 | 18 | 1 | 43 | 490 | 3.98 | 6.11 | 47,923 | 77 | 567 | 171,195 | 3.21 |
| 1909. | 121,542 | 83,685,994 | 253 | 92 | 29 | 22 | 60 | 3 | 19 | 2 | 38 | 509 | 4.19 | 6.08 | 46,633 | 92 | 601 | 168,175 | 3.57 |
| 1910. | 126,037 | 90,917,176 | 253 | 92 | 34 | 21 | 67 | 2 | 21 | 4 | 41 | 498 | 3.90 | 5.90 | 47,391 | 84 | 630 | 173,338 | 4.01 |
| 1911. | 127,807 | 84,436,869 | 246 | 78 | 35 | 25 | 51 | 5 | 18 | ... | 40 | 438 | 3.90 | 5.90 | 47,231 | 103 | 691 | 175,098 | 3.43 |
| 1912. | 128,667 | 91,056,964 | 261 | 86 | 43 | 11 | 62 | 3 | 30 | 2 | 56 | 537 | 4.33 | 6.08 | 46,643 | 67 | 604 | 175,710 | 3.40 |
| 1913. | 131,717 | 91,597,611 | 231 | 76 | 43 | 13 | 70 | 1 | 17 | 1 | 44 | 537 | 3.98 | 5.66 | 46,842 | 66 | 603 | 176,319 | 3.32 |
| 1914. | 131,296 | 89,477,166 | 268 | 81 | 33 | 8 | 69 | 4 | 12 | 1 | 51 | 527 | 4.01 | 5.90 | 46,043 | 61 | 588 | 177,329 | 3.29 |
| Totals and averages, .. | 1,961,680 | 1,306,976,649 | 4,029 | 1,266 | 593 | 317 | 845 | 31 | 404 | 16 | 788 | 8,289 | 1.29 | 7.39 | 830,755 | 1,371 | 9,665 | 2,792,445 | 3.46 |

TABLE 7.—Mines in operation, inside employees, fatal accidents inside, production per fatality inside, fatalities inside per 1,000,000 tons produced, by districts, 1915

| Districts | Mines in operation | Production in tons of 2,000 pounds | Inside employees | Outside employees | Total number of employees | Fatalities inside | Fatalities outside | Fatalities inside per 1,000 employees | Production per fatality inside | Fatalities inside per 1,000,000 tons produced | Fatalities inside and outside per 1,000 employees |
|----------------------|--------------------|------------------------------------|------------------|-------------------|---------------------------|-------------------|--------------------|---------------------------------------|--------------------------------|---|---|
| First, | 28 | 4,729,612 | 6,997 | 2,121 | 9,115 | 32 | 6 | 4.57 | 147,800 | 6.77 | 4.17 |
| Second, | 26 | 4,457,375 | 7,422 | 1,745 | 9,167 | 29 | 4 | 3.91 | 153,703 | 6.51 | 3.69 |
| Third, | 25 | 3,891,912 | 5,991 | 1,578 | 7,569 | 24 | 2 | 4.01 | 162,163 | 6.17 | 3.39 |
| Fourth, | 37 | 3,891,912 | 7,011 | 1,663 | 8,674 | 29 | 2 | 4.13 | 159,963 | 7.14 | 3.34 |
| Fifth, | 30 | 3,495,856 | 5,130 | 1,521 | 6,651 | 15 | 1 | 2.93 | 233,124 | 4.29 | 2.26 |
| Sixth, | 47 | 5,964,411 | 9,922 | 2,690 | 12,612 | 45 | 3 | 4.54 | 132,542 | 7.54 | 3.83 |
| Seventh, | 44 | 6,198,043 | 9,092 | 2,371 | 11,463 | 60 | 3 | 6.60 | 103,301 | 9.68 | 5.67 |
| Eighth, | 47 | 5,234,563 | 9,749 | 2,473 | 12,222 | 32 | 3 | 3.26 | 131,054 | 5.23 | 2.75 |
| Ninth, | 38 | 5,472,795 | 8,438 | 2,122 | 10,560 | 39 | 2 | 3.89 | 144,685 | 6.91 | 3.04 |
| Tenth, | 47 | 5,619,856 | 8,446 | 2,553 | 10,999 | 32 | 2 | 3.84 | 139,101 | 6.97 | 3.48 |
| Eleventh, | 81 | 6,867,759 | 7,595 | 2,948 | 10,543 | 22 | 6 | 2.90 | 273,171 | 3.57 | 2.63 |
| Twelfth, | 21 | 3,035,577 | 4,759 | 2,004 | 6,763 | 11 | 2 | 2.31 | 275,962 | 3.69 | 1.61 |
| Thirteenth, | 30 | 3,613,920 | 4,455 | 2,508 | 6,963 | 28 | 2 | 6.29 | 129,069 | 7.75 | 4.31 |
| Fourteenth, | 39 | 3,900,316 | 4,403 | 2,448 | 6,851 | 10 | 6 | 2.27 | 330,032 | 3.03 | 2.33 |
| Fifteenth, | 28 | 2,728,467 | 4,904 | 1,820 | 6,724 | 15 | 2 | 3.06 | 131,898 | 5.49 | 2.63 |
| Sixteenth, | 44 | 3,905,924 | 5,337 | 2,135 | 7,472 | 21 | 1 | 3.93 | 152,663 | 6.55 | 2.95 |
| Seventeenth, | 44 | 5,272,872 | 6,406 | 2,946 | 9,352 | 21 | 7 | 3.28 | 251,089 | 3.98 | 2.99 |
| Eighteenth, | 46 | 3,329,693 | 4,413 | 1,939 | 6,352 | 21 | 4 | 4.76 | 168,557 | 5.93 | 3.94 |
| Nineteenth, | 45 | 3,879,706 | 4,989 | 2,492 | 7,481 | 25 | 5 | 5.01 | 155,188 | 6.44 | 4.06 |
| Twentieth, | 53 | 2,392,272 | 4,285 | 1,541 | 5,826 | 13 | 1 | 3.63 | 177,098 | 5.64 | 2.40 |
| Twenty-first, | 37 | 3,361,422 | 5,022 | 1,951 | 6,973 | 21 | 1 | 4.18 | 160,353 | 6.24 | 3.16 |
| Totals and averages, | 795 | 89,377,706 | 131,296 | 46,043 | 177,339 | 527 | 67 | 4.07 | 169,597 | 5.90 | 3.32 |

TABLE 8.—Fatal accidents inside the mines and production per accident, by counties, 1899-1915, inclusive

| Years | Counties | Number of mines | Number of inside employees | Production in tons of 2,000 pounds | Fatal accidents by falls | Fatal accidents by explosions of gas | Total fatal accidents inside | Production in tons per fatal accident inside | Lives lost per 1,000 employees |
|-------|--------------------------|-----------------|----------------------------|------------------------------------|--------------------------|--------------------------------------|------------------------------|--|--------------------------------|
| 1899 | Luzerne, | 156 | 33,078 | 22,287,712 | 98 | 16 | 141 | 154,776 | 4.35 |
| 1900 | | 152 | 34,476 | 21,481,122 | 57 | 17 | 155 | 159,119 | 3.91 |
| 1901 | | 148 | 36,019 | 23,963,869 | 95 | 22 | 182 | 131,670 | 5.06 |
| 1902 | | 229 | 35,491 | 14,577,949 | 36 | 7 | 93 | 156,752 | 2.62 |
| 1903 | | 233 | 38,370 | 27,878,362 | 75 | 15 | 169 | 164,961 | 4.40 |
| 1904 | | 256 | 41,602 | 27,705,288 | 106 | 8 | 200 | 138,526 | 4.81 |
| 1905 | | 254 | 43,109 | 29,992,636 | 122 | 14 | 215 | 139,501 | 4.90 |
| 1906 | | 271 | 41,643 | 26,612,192 | 84 | 27 | 194 | 157,176 | 4.66 |
| 1907 | | 243 | 42,922 | 30,853,087 | 105 | 19 | 223 | 138,355 | 5.31 |
| 1908 | | 243 | 46,302 | 31,733,997 | 116 | 34 | 258 | 122,931 | 5.57 |
| 1909 | | 241 | 45,121 | 30,992,306 | 112 | 16 | 202 | 153,427 | 4.48 |
| 1910 | | 250 | 44,383 | 32,106,979 | 96 | 12 | 215 | 119,335 | 4.84 |
| 1911 | | 281 | 46,863 | 35,061,582 | 92 | 18 | 205 | 171,032 | 4.37 |
| 1912 | | 311 | 47,133 | 32,643,232 | 83 | 24 | 202 | 161,690 | 4.29 |
| 1913 | | 298 | 47,943 | 36,326,287 | 107 | 10 | 211 | 172,162 | 4.40 |
| 1914 | | 293 | 51,791 | 36,973,767 | 111 | 18 | 217 | 170,386 | 4.19 |
| 1915 | | 308 | 50,950 | 35,266,086 | 103 | 17 | 215 | 164,028 | 4.21 |
| | Totals and averages, ... | ..... | 726,297 | 496,451,453 | 1,598 | 294 | 3,280 | 151,357 | 4.52 |
| 1899 | Lackawanna, | 76 | 22,314 | 14,838,821 | 71 | 2 | 103 | 137,397 | 4.84 |
| 1900 | | 83 | 23,907 | 13,755,961 | 55 | 8 | 89 | 154,561 | 3.72 |
| 1901 | | 80 | 26,207 | 17,258,125 | 63 | 4 | 109 | 158,331 | 4.16 |
| 1902 | | 118 | 25,931 | 11,851,169 | 23 | ..... | 42 | 275,609 | 1.66 |
| 1903 | | 114 | 27,755 | 20,046,133 | 59 | 3 | 107 | 187,347 | 3.86 |
| 1904 | | 115 | 30,500 | 19,007,628 | 62 | 7 | 115 | 165,284 | 3.77 |
| 1905 | | 126 | 30,853 | 19,709,164 | 82 | 2 | 127 | 155,190 | 4.12 |
| 1906 | | 157 | 31,196 | 18,840,561 | 70 | 4 | 112 | 168,219 | 3.59 |
| 1907 | | 155 | 32,444 | 22,433,409 | 87 | 16 | 174 | 128,928 | 5.36 |
| 1908 | | 162 | 32,296 | 21,631,985 | 80 | 3 | 141 | 153,418 | 4.37 |
| 1909 | | 157 | 33,764 | 20,489,212 | 73 | 1 | 129 | 158,831 | 3.82 |
| 1910 | | 157 | 33,285 | 21,182,921 | 87 | 3 | 139 | 152,395 | 4.18 |
| 1911 | | 151 | 34,069 | 22,598,414 | 78 | 3 | 218 | 103,662 | 6.40 |
| 1912 | | 153 | 34,074 | 20,617,308 | 79 | 4 | 127 | 162,341 | 3.73 |
| 1913 | | 156 | 34,285 | 21,836,671 | 83 | 4 | 140 | 155,976 | 4.08 |
| 1914 | | 167 | 34,445 | 21,649,783 | 62 | ..... | 130 | 166,537 | 3.77 |
| 1915 | | 160 | 34,488 | 21,697,563 | 82 | 2 | 139 | 156,098 | 4.03 |
| | Totals and averages, ... | ..... | 521,813 | 329,444,842 | 1,196 | 67 | 2,147 | 153,444 | 4.11 |
| 1899 | Schuylkill, | 83 | 20,474 | 13,694,171 | 43 | 8 | 90 | 152,157 | 4.40 |
| 1900 | | 82 | 19,952 | 12,998,899 | 32 | 11 | 82 | 158,523 | 4.11 |
| 1901 | | 76 | 20,415 | 15,277,658 | 39 | 6 | 93 | 164,276 | 4.56 |
| 1902 | | 76 | 20,876 | 8,622,102 | 37 | 3 | 60 | 143,702 | 2.87 |
| 1903 | | 76 | 20,144 | 16,359,305 | 44 | 6 | 88 | 186,244 | 4.37 |
| 1904 | | 106 | 22,272 | 16,173,158 | 43 | 5 | 101 | 151,151 | 4.89 |
| 1905 | | 132 | 25,716 | 17,975,160 | 60 | 11 | 136 | 132,170 | 5.89 |
| 1906 | | 152 | 25,365 | 19,376,533 | 32 | 7 | 94 | 174,218 | 3.71 |
| 1907 | | 140 | 25,181 | 20,160,970 | 48 | 3 | 123 | 163,910 | 4.88 |
| 1908 | | 179 | 26,625 | 18,196,714 | 54 | 17 | 121 | 150,386 | 4.54 |
| 1909 | | 178 | 25,749 | 16,794,597 | 35 | 7 | 88 | 190,848 | 3.42 |
| 1910 | | 188 | 25,302 | 17,696,013 | 44 | 4 | 94 | 188,255 | 3.72 |
| 1911 | | 185 | 26,015 | 19,234,447 | 53 | 6 | 118 | 163,004 | 4.54 |
| 1912 | | 212 | 26,619 | 17,986,745 | 55 | 5 | 109 | 165,016 | 4.09 |
| 1913 | | 191 | 26,768 | 19,511,483 | 43 | 29 | 134 | 115,608 | 5.01 |
| 1914 | | 194 | 25,898 | 19,166,424 | 29 | 9 | 101 | 189,767 | 3.90 |
| 1915 | | 215 | 26,111 | 19,078,139 | 50 | 9 | 109 | 175,029 | 4.17 |
| | Totals and averages, ... | ..... | 409,482 | 285,332,724 | 741 | 149 | 1,747 | 163,327 | 4.27 |

TABLE 8.—Continued

| Years | Counties | Number of mines | Number of inside employes | Production in tons of 2,000 pounds | Fatal accidents by falls | Fatal accidents by explosions of gas | Total fatal accidents inside | Production in tons per fatal accident inside | Lives lost per 1,000 employes |
|--------------------------|-----------------------|-----------------|---------------------------|------------------------------------|--------------------------|--------------------------------------|------------------------------|--|-------------------------------|
| 1899 | Northumberland, | 28 | 9,739 | 4,860,292 | 19 | 2 | 23 | 211,317 | 2.36 |
| 1900 | | 27 | 9,741 | 4,690,944 | 15 | 1 | 33 | 142,150 | 3.39 |
| 1901 | | 27 | 9,867 | 5,430,991 | 21 | 1 | 36 | 150,861 | 3.65 |
| 1902 | | 28 | 9,670 | 3,162,066 | 10 | 10 | 34 | 93,002 | 3.52 |
| 1903 | | 26 | 9,312 | 5,518,580 | 21 | 2 | 35 | 157,674 | 3.76 |
| 1904 | | 52 | 9,248 | 5,516,647 | 15 | 6 | 39 | 141,452 | 4.22 |
| 1905 | | 54 | 9,823 | 5,483,181 | 21 | 1 | 42 | 130,552 | 4.28 |
| 1906 | | 70 | 9,585 | 5,367,497 | 17 | 3 | 32 | 167,734 | 3.34 |
| 1907 | | 60 | 10,653 | 6,665,292 | 23 | 5 | 45 | 148,120 | 4.22 |
| 1908 | | 69 | 10,639 | 6,067,741 | 23 | 3 | 49 | 123,831 | 4.61 |
| 1909 | | 67 | 10,361 | 5,987,535 | 25 | 3 | 46 | 130,170 | 4.44 |
| 1910 | | 73 | 10,665 | 6,324,317 | 17 | ..... | 32 | 197,635 | 3.00 |
| 1911 | | 75 | 10,772 | 7,109,372 | 16 | 5 | 39 | 182,292 | 3.62 |
| 1912 | | 75 | 11,002 | 6,851,491 | 22 | 1 | 36 | 196,319 | 3.27 |
| 1913 | | 70 | 10,836 | 7,012,687 | 30 | 2 | 15 | 155,327 | 4.15 |
| 1914 | | 75 | 11,033 | 6,710,121 | 19 | 7 | 55 | 122,002 | 4.96 |
| 1915 | | 76 | 10,768 | 6,354,484 | 23 | 2 | 38 | 167,223 | 3.53 |
| Totals and averages, .. |  | ..... | 173,764 | 99,113,648 | 327 | 58 | 659 | 150,400 | 3.79 |
| 1899 | Carbon, | 11 | 2,025 | 1,826,267 | 2 | ..... | 10 | 182,627 | 4.94 |
| 1900 | | 11 | 2,052 | 1,863,637 | 1 | ..... | 3 | 621,212 | 1.46 |
| 1901 | | 10 | 2,265 | 1,853,519 | 3 | ..... | 10 | 185,852 | 4.42 |
| 1902 | | 10 | 2,242 | 1,104,462 | 1 | ..... | 4 | 276,116 | 1.78 |
| 1903 | | 15 | 2,120 | 2,150,021 | 2 | ..... | 13 | 165,886 | 6.13 |
| 1904 | | 20 | 2,381 | 2,253,512 | 2 | ..... | 7 | 221,930 | 2.94 |
| 1905 | | 23 | 2,460 | 2,476,406 | ..... | ..... | 9 | 275,156 | 3.66 |
| 1906 | | 23 | 2,740 | 2,400,823 | 2 | 1 | 6 | 273,470 | 2.19 |
| 1907 | | 30 | 2,989 | 2,762,523 | 3 | 1 | 14 | 137,322 | 4.68 |
| 1908 | | 22 | 3,531 | 2,784,946 | 4 | ..... | 9 | 369,438 | 2.55 |
| 1909 | | 28 | 3,492 | 2,652,997 | 3 | 1 | 16 | 165,812 | 4.58 |
| 1910 | | 33 | 3,575 | 3,214,169 | 3 | 1 | 15 | 214,278 | 4.20 |
| 1911 | | 31 | 3,607 | 3,312,483 | 6 | 1 | 18 | 184,027 | 4.99 |
| 1912 | | 24 | 4,083 | 2,813,876 | 1 | ..... | 8 | 355,484 | 1.96 |
| 1913 | | 20 | 3,930 | 3,353,277 | 5 | 3 | 15 | 223,552 | 3.82 |
| 1914 | | 22 | 5,769 | 3,186,691 | 3 | 7 | 18 | 177,028 | 3.12 |
| 1915 | | 19 | 4,082 | 3,237,156 | 3 | ..... | 11 | 363,378 | 2.73 |
| Totals and averages, .. |  | ..... | 53,292 | 43,221,765 | 44 | 15 | 186 | 232,375 | 3.49 |
| 1899 | Columbia, | 6 | 1,346 | 1,002,469 | 2 | ..... | 5 | 200,494 | 3.71 |
| 1900 | | 7 | 1,163 | 980,721 | 3 | ..... | 5 | 196,144 | 4.50 |
| 1901 | | 5 | 714 | 1,209,859 | 2 | ..... | 4 | 502,465 | 5.69 |
| 1902 | | 6 | 1,428 | 738,070 | ..... | ..... | 3 | 246,023 | 2.69 |
| 1903 | | 5 | 1,454 | 1,353,904 | ..... | ..... | 3 | 451,301 | 2.06 |
| 1904 | | 10 | 1,419 | 1,151,624 | 7 | ..... | 10 | 115,162 | 7.05 |
| 1905 | | 9 | 1,567 | 1,229,697 | 2 | ..... | 7 | 175,671 | 4.47 |
| 1906 | | 7 | 1,401 | 969,065 | 3 | 1 | 7 | 128,438 | 4.99 |
| 1907 | | 8 | 1,468 | 1,188,268 | 1 | ..... | 4 | 297,667 | 2.72 |
| 1908 | | 9 | 1,559 | 1,182,326 | 2 | ..... | 5 | 226,465 | 3.21 |
| 1909 | | 8 | 1,568 | 1,093,102 | 1 | ..... | 2 | 546,551 | 1.28 |
| 1910 | | 11 | 1,176 | 960,145 | 1 | ..... | 1 | 960,145 | .85 |
| 1911 | | 7 | 1,473 | 1,193,776 | 1 | ..... | 1 | 135,739 | .68 |
| 1912 | | 11 | 1,440 | 1,211,557 | 3 | ..... | 6 | 262,421 | 4.17 |
| 1913 | | 11 | 1,393 | 1,314,048 | ..... | ..... | 4 | 263,662 | 2.87 |
| 1914 | | 11 | 1,366 | 1,066,471 | 2 | ..... | 3 | 375,490 | 2.30 |
| 1915 | | 8 | 1,234 | 1,202,465 | ..... | 2 | 1 | 309,616 | 3.00 |
| Totals and averages, ... |  | ..... | 23,281 | 18,951,098 | 30 | 3 | 74 | 256,096 | 3.18 |

TABLE 8.—Continued

| Years | Counties | Number of mines | Number of inside employees | Production in tons of 2,000 pounds. | Fatal accidents by falls | Fatal accidents by explosions of gas | Total fatal accidents inside | Production in tons per fatal accident inside | Lives lost per 1,000 employees |
|---------------------------|--------------------|-----------------|----------------------------|-------------------------------------|--------------------------|--------------------------------------|------------------------------|--|--------------------------------|
| 1899 | Dauphin, | 5 | 1,583 | 817,328 | 1 | ..... | 8 | 102,166 | 5.05 |
| 1900 | | 5 | 1,698 | 779,185 | ..... | 1 | 2 | 87,392 | 4.98 |
| 1901 | | 5 | 1,562 | 830,572 | ..... | ..... | 7 | 118,653 | 4.48 |
| 1902 | | 5 | 1,120 | 423,341 | ..... | ..... | 1 | 423,341 | .89 |
| 1903 | | 5 | 1,256 | 732,970 | ..... | ..... | 5 | 146,594 | 3.98 |
| 1904 | | 9 | 1,269 | 723,414 | ..... | 1 | *11 | 65,765 | 8.67 |
| 1905 | | 10 | 1,350 | 723,126 | 1 | 1 | 3 | 144,625 | 3.70 |
| 1906 | | 10 | 1,422 | 734,723 | ..... | ..... | 5 | 244,908 | 2.11 |
| 1907 | | 12 | 1,393 | 829,980 | ..... | ..... | 5 | 165,996 | 3.59 |
| 1908 | | 12 | 1,481 | 848,095 | 1 | ..... | 9 | 94,223 | 6.08 |
| 1909 | | 12 | 1,419 | 932,393 | 1 | ..... | 7 | 406,197 | 1.41 |
| 1910 | | 11 | 1,446 | 886,192 | 1 | ..... | 8 | 110,774 | 5.53 |
| 1911 | | 11 | 1,530 | 946,963 | 4 | 1 | 10 | 94,696 | 6.54 |
| 1912 | | 10 | 1,606 | 945,102 | ..... | 1 | 3 | 317,634 | 1.87 |
| 1913 | | 13 | 1,687 | 1,060,270 | ..... | ..... | 5 | 212,064 | 2.96 |
| 1914 | 10 | 1,697 | 1,000,983 | ..... | ..... | 6 | 166,831 | 3.54 | |
| 1915 | 9 | 1,716 | 972,110 | ..... | ..... | 3 | 324,037 | 1.75 | |
| Totals and averages, | | | 25,145 | 14,186,612 | 28 | 7 | 99 | 112,269 | 3.94 |
| 1899 | Susquehanna, | 19 | 941 | 699,020 | ..... | ..... | ..... | ..... | ..... |
| 1900 | | 19 | 964 | 556,003 | ..... | ..... | ..... | ..... | ..... |
| 1901 | | 19 | 1,104 | 716,105 | ..... | ..... | ..... | ..... | ..... |
| 1902 | | 19 | 1,086 | 452,758 | ..... | ..... | 2 | 226,379 | 1.81 |
| 1903 | | 13 | 1,064 | 890,773 | 4 | ..... | 6 | 123,462 | 5.64 |
| 1904 | | 12 | 1,102 | 692,440 | 13 | ..... | 6 | 115,407 | 5.44 |
| 1905 | | 12 | 1,026 | 680,146 | 6 | ..... | 6 | 113,358 | 5.85 |
| 1906 | | 12 | 1,028 | 562,103 | 2 | ..... | 6 | 93,684 | 5.84 |
| 1907 | | 3 | 970 | 644,088 | 4 | ..... | 12 | 53,674 | 12.37 |
| 1908 | | 1 | 1,005 | 487,900 | ..... | ..... | 2 | 243,950 | 1.99 |
| 1909 | | 12 | 953 | 589,835 | ..... | ..... | 3 | 196,612 | 3.15 |
| 1910 | | 12 | 971 | 628,808 | 4 | ..... | 4 | 157,202 | 4.12 |
| 1911 | | 3 | 962 | 672,600 | ..... | ..... | 1 | 672,600 | 1.04 |
| 1912 | | 3 | 1,044 | 582,510 | ..... | ..... | 7 | 83,216 | 6.70 |
| 1913 | | 3 | 1,096 | 594,764 | 1 | ..... | 2 | 297,382 | 1.83 |
| 1914 | | 3 | 1,204 | 658,249 | ..... | ..... | 4 | 164,562 | 3.32 |
| 1915 | | 4 | 1,110 | 760,076 | 1 | ..... | 4 | 190,019 | 3.60 |
| Totals and averages, | | | 17,370 | 10,805,178 | 36 | ..... | 65 | 166,234 | 3.70 |
| 1899 | Sullivan, | 12 | 322 | 183,182 | 1 | ..... | 1 | 183,182 | 3.11 |
| 1900 | | 12 | 337 | 235,112 | 3 | ..... | 3 | 78,371 | 8.90 |
| 1901 | | 12 | 281 | 152,505 | ..... | ..... | ..... | ..... | ..... |
| 1902 | | 3 | 523 | 409,017 | 3 | ..... | 5 | 81,803 | 9.56 |
| 1903 | | 3 | 455 | 293,442 | 2 | ..... | 2 | 146,721 | 4.40 |
| 1904 | | 3 | 443 | 294,305 | 1 | ..... | 1 | 294,305 | 2.26 |
| 1905 | | 4 | 331 | 310,496 | 1 | ..... | 2 | 155,248 | 6.04 |
| 1906 | | 4 | 414 | 358,627 | 1 | ..... | 2 | 179,313 | 4.83 |
| 1907 | | 4 | 459 | 433,161 | 1 | ..... | 1 | 433,161 | 2.18 |
| 1908 | | 4 | 583 | 550,712 | ..... | ..... | 1 | 275,356 | 3.43 |
| 1909 | | 4 | 661 | 641,216 | ..... | ..... | 3 | 320,608 | 3.03 |
| 1910 | | 4 | 614 | 632,874 | ..... | ..... | 1 | 632,874 | 1.63 |
| 1911 | | 4 | 662 | 717,429 | ..... | ..... | 4 | 179,357 | 6.04 |
| 1912 | | 4 | 677 | 649,235 | ..... | ..... | ..... | ..... | ..... |
| 1913 | | 4 | 706 | 664,063 | ..... | ..... | 1 | 664,063 | 1.42 |
| 1914 | | 4 | 714 | 642,730 | ..... | ..... | ..... | ..... | ..... |
| 1915 | | 4 | 716 | 601,253 | 3 | ..... | 3 | 201,451 | 4.19 |
| Totals and averages, | | | 8,928 | 7,773,399 | 22 | ..... | 30 | 259,113 | 3.36 |

*Williamstown disaster.

TABLE 8.—Continued

| Years | Counties | Number of mines | Number of inside employes | Production in tons of 2,000 pounds | Fatal accidents by falls | Fatal accidents by explosions of gas | Total fatal accidents inside | Production in tons per fatal accident inside | Lives lost per 1,000 employes |
|--------------------------|--------------|-----------------|---------------------------|------------------------------------|--------------------------|--------------------------------------|------------------------------|--|-------------------------------|
| 1899 | Wayne, | 1 | 353 | 309,069 | ..... | ..... | ..... | ..... | ..... |
| 1900 | | 1 | 11 | 21,862 | ..... | ..... | ..... | ..... | ..... |
| 1901 | | 1 | 589 | 369,462 | ..... | ..... | ..... | ..... | ..... |
| 1902 |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 1903 | | 1 | 125 | 68,895 | ..... | ..... | ..... | ..... | ..... |
| 1904 | | 1 | 123 | 71,553 | ..... | ..... | ..... | ..... | ..... |
| 1905 | | 1 | 136 | 67,008 | ..... | ..... | ..... | ..... | ..... |
| 1906 | | 3 | 202 | 71,381 | ..... | ..... | ..... | ..... | ..... |
| 1907 | | 3 | 270 | 85,594 | ..... | ..... | ..... | ..... | ..... |
| 1908 | | 2 | 212 | 63,906 | ..... | ..... | ..... | ..... | ..... |
| 1909 | | 2 | 184 | 50,339 | ..... | ..... | ..... | ..... | ..... |
| 1910 | | 2 | 125 | 51,576 | ..... | ..... | ..... | ..... | ..... |
| 1911 | | 2 | 84 | 70,150 | 1 | ..... | 1 | 70,150 | 11.91 |
| 1912 | | 2 | 129 | 92,843 | ..... | ..... | ..... | ..... | ..... |
| 1913 | | 1 | 23 | 52,814 | ..... | ..... | ..... | ..... | ..... |
| 1914 | | 2 | 76 | 133,402 | ..... | ..... | ..... | ..... | ..... |
| 1915 | | 3 | 71 | 105,274 | 1 | ..... | 1 | 105,274 | 14.08 |
| Totals and averages, ... |  | ..... | 2,713 | 1,634,928 | 2 | ..... | 2 | 842,464 | .74 |

TABLE 9.—Miners and miners' laborers employed in the mines; number of fatal accidents per 1,000 employes; average number of days worked by breakers; average production per day, 1882-1915, inclusive

| Years | Number of miners employed | Number of miners killed | Number of miners killed per 1,000 employes. | Number of miners' laborers employed | Number of miners' laborers killed | Number of miners' laborers killed per 1,000 employes | Average number of days worked by breakers | Average production per day worked by breakers, net tons |
|-------------------------|---------------------------|-------------------------|---|-------------------------------------|-----------------------------------|--|---|---|
| 1882, | 22,843 | 135 | 5.91 | 15,229 | 56 | 3.68 | 218 | 160,814 |
| 1883, | 25,219 | 136 | 5.37 | 16,879 | 67 | 3.97 | 232 | 162,704 |
| 1884, | 27,100 | 132 | 4.87 | 19,606 | 81 | 4.13 | 192 | 189,941 |
| 1885, | 28,505 | 160 | 5.65 | 20,128 | 86 | 4.27 | 204 | 187,413 |
| 1886, | 25,970 | 131 | 5.04 | 17,068 | 68 | 3.98 | 196 | 198,728 |
| 1887, | 29,558 | 102 | 3.45 | 17,548 | 57 | 3.25 | 208 | 202,675 |
| 1888, | 34,547 | 169 | 4.89 | 21,952 | 87 | 3.96 | 218 | 213,922 |
| 1889, | 30,504 | 194 | 6.36 | 19,368 | 79 | 4.08 | 197 | 221,978 |
| Totals and averages, .. | 224,146 | 1,159 | 5.12 | 147,778 | 551 | 3.93 | 208 | 192,272 |
| 1890, | 28,936 | 146 | 5.05 | 18,620 | 95 | 5.10 | 210 | 214,220 |
| 1891, | 30,552 | 180 | 5.89 | 19,590 | 119 | 6.07 | 213 | 233,340 |
| 1892, | 30,779 | 180 | 5.84 | 22,110 | 111 | 5.02 | 202 | 253,599 |
| 1893, | 32,881 | 195 | 5.93 | 22,852 | 108 | 4.73 | 202 | 261,590 |
| 1894, | 33,357 | 218 | 6.54 | 27,942 | 91 | 3.80 | 175 | 291,240 |
| 1895, | 34,553 | 179 | 5.18 | 24,638 | 115 | 4.67 | 187 | 304,539 |
| 1896, | 37,003 | 204 | 5.51 | 26,530 | 134 | 5.09 | 170 | 316,725 |
| 1897, | 36,932 | 210 | 5.69 | 27,277 | 99 | 3.63 | 151 | 348,219 |
| Totals and averages, .. | 264,993 | 1,512 | 5.71 | 185,560 | 872 | 4.70 | 189 | 277,934 |
| 1898, | 36,377 | 176 | 4.84 | 24,060 | 124 | 5.15 | 151 | 349,753 |
| 1899, | 36,421 | 199 | 5.46 | 23,946 | 114 | 4.75 | 179 | 338,091 |
| 1900, | 36,832 | 184 | 4.99 | 24,513 | 95 | 3.88 | 176 | 325,928 |
| 1901, | 37,804 | 224 | 5.92 | 26,265 | 122 | 4.64 | 195 | 344,075 |
| 1902, | 36,392 | 114 | 3.13 | 25,443 | 62 | 2.44 | *116 | 325,387 |
| 1903, | 36,823 | 204 | 5.54 | 27,533 | 110 | 4.00 | 211 | 356,552 |
| 1904, | 39,848 | 233 | 5.85 | 31,217 | 145 | 4.64 | 213 | 345,511 |
| 1905, | 42,078 | 308 | 7.32 | 31,967 | 148 | 4.63 | 208 | 378,113 |
| Totals and averages, .. | 302,575 | 1,642 | 5.43 | 215,044 | 920 | 4.28 | 181 | 349,301 |
| 1906, | 41,801 | 226 | 5.41 | 29,652 | 133 | 4.48 | 206 | 350,192 |
| 1907, | 43,035 | 309 | 7.18 | 29,984 | 136 | 4.54 | 229 | 379,103 |
| 1908, | 44,240 | 313 | 7.05 | 32,853 | 154 | 4.68 | 211 | 345,940 |
| 1909, | 44,675 | 264 | 5.91 | 32,232 | 126 | 3.91 | 205 | 391,336 |
| 1910, | 43,651 | 254 | 5.82 | 32,040 | 147 | 4.59 | 212 | 394,736 |
| 1911, | 45,324 | 306 | 6.75 | 32,905 | 176 | 5.35 | 234 | 388,535 |
| 1912, | 44,696 | 262 | 5.86 | 33,438 | 117 | 3.50 | 220 | 383,758 |
| 1913, | 44,346 | 286 | 6.45 | 33,973 | 148 | 4.36 | 242 | 378,624 |
| Totals and averages, .. | 351,868 | 2,220 | 6.31 | 257,077 | 1,137 | 4.42 | 220 | 376,528 |
| 1914, | 45,897 | 296 | 6.45 | 37,030 | 126 | 3.40 | 229 | 398,208 |
| 1915, | 46,422 | 281 | 6.05 | 36,379 | 143 | 3.93 | 221 | 404,424 |
| Totals and averages, .. | 92,319 | 577 | 6.25 | 73,409 | 2 69 | 3.66 | 225 | 397,234 |

*Strike during the year.

†Washeries worked during the strike. Time was not computed in the average days worked.

TABLE 10.—Employees inside and outside the mines; number of fatal accidents per 1,000 employees; production per fatality, 1881-1915, inclusive

| Years | Inside | | | | Outside | | | Number of lives lost inside and outside per 1,000 employees |
|-------------------------|-----------|-----------------|--------------------------------|---|-----------|-----------------|--------------------------------|---|
| | Employees | Fatal accidents | Lives lost per 1,000 employees | Production of coal in tons of 2,000 pounds for each life lost | Employees | Fatal accidents | Lives lost per 1,000 employees | |
| 1881, | 45,619 | 234 | 5.13 | 146,165 | 30,412 | 39 | 1.28 | 3.59 |
| 1882, | 50,764 | 254 | 4.92 | 140,230 | 31,436 | 41 | 1.30 | 3.54 |
| 1883, | 56,286 | 274 | 4.87 | 137,764 | 35,153 | 49 | 1.39 | 3.53 |
| 1884, | 61,922 | 286 | 4.62 | 127,513 | 39,151 | 46 | 1.17 | 3.28 |
| 1885, | 62,961 | 290 | 4.61 | 131,834 | 37,419 | 42 | 1.12 | 3.31 |
| 1886, | 63,930 | 236 | 3.69 | 165,046 | 39,114 | 43 | 1.10 | 3.21 |
| 1887, | 67,716 | 270 | 3.99 | 156,151 | 38,801 | 46 | 1.19 | 3.47 |
| 1888, | 78,688 | 317 | 4.03 | 147,114 | 43,630 | 47 | 1.08 | 2.98 |
| 1889, | 74,178 | 339 | 4.57 | 128,763 | 45,468 | 58 | 1.28 | 3.32 |
| 1890, | 73,613 | 323 | 4.39 | 139,276 | 46,306 | 55 | 1.19 | 3.15 |
| Totals and averages, .. | 615,617 | 2,823 | 4.44 | 141,016 | 386,790 | 466 | 1.20 | 3.22 |
| 1891, | 76,500 | 372 | 4.86 | 133,606 | 46,379 | 56 | 1.20 | 3.47 |
| 1892, | 82,088 | 361 | 4.40 | 141,903 | 48,212 | 57 | 1.18 | 3.21 |
| 1893, | 86,287 | 388 | 4.49 | 136,188 | 51,682 | 68 | 1.32 | 3.30 |
| 1894, | 87,901 | 368 | 4.19 | 138,497 | 52,038 | 78 | 1.50 | 3.19 |
| 1895, | 89,251 | 354 | 3.97 | 160,872 | 54,454 | 67 | 1.23 | 2.93 |
| 1896, | 94,798 | 430 | 4.54 | 125,217 | 55,290 | 72 | 1.30 | 3.34 |
| 1897, | 95,812 | 372 | 3.88 | 141,347 | 53,745 | 51 | .95 | 2.83 |
| 1898, | 91,171 | 360 | 3.95 | 146,674 | 51,249 | 51 | .99 | 2.89 |
| 1899, | 92,167 | 389 | 4.22 | 155,571 | 48,437 | 72 | 1.49 | 3.28 |
| 1900, | 94,140 | 358 | 3.80 | 160,233 | 49,684 | 53 | 1.07 | 2.86 |
| Totals and averages, .. | 890,184 | 3,752 | 4.21 | 143,604 | 511,130 | 625 | 1.22 | 3.12 |
| 1901, | 98,434 | 441 | 4.48 | 152,142 | 49,217 | 72 | 1.46 | 3.47 |
| 1902, | 98,377 | 245 | *2.49 | 168,739 | 49,762 | 55 | 1.11 | 2.03 |
| 1903, | 102,055 | 426 | 4.17 | 176,602 | 49,772 | 92 | 1.85 | 3.41 |
| 1904, | 110,362 | 496 | 4.49 | 148,376 | 50,968 | 99 | 1.94 | 3.69 |
| 1905, | 116,371 | 551 | 4.73 | 142,735 | 51,883 | 93 | 1.79 | 3.83 |
| 1906, | 114,998 | 456 | 3.97 | 141,258 | 51,177 | 101 | 1.98 | 3.35 |
| 1907, | 117,849 | 601 | 5.10 | 143,189 | 50,925 | 107 | 2.10 | 4.20 |
| 1908, | 124,233 | 596 | 4.79 | 110,173 | 50,270 | 82 | 1.63 | 3.88 |
| 1909, | 123,272 | 490 | 3.98 | 163,722 | 47,923 | 77 | 1.61 | 3.31 |
| 1910, | 121,542 | 509 | 4.19 | 164,499 | 46,633 | 92 | 1.97 | 3.57 |
| Totals and averages, .. | 1,127,491 | 4,811 | 4.27 | 154,138 | 498,530 | 870 | 1.75 | 3.49 |
| 1911, | 126,037 | 615 | 4.88 | 147,833 | 47,301 | 84 | 1.78 | 4.03 |
| 1912, | 127,807 | 498 | 3.90 | 169,532 | 47,291 | 103 | 2.18 | 3.43 |
| 1913, | 128,667 | 557 | 4.33 | 161,501 | 46,643 | 67 | 1.44 | 3.56 |
| 1914, | 134,073 | 534 | 3.98 | 170,767 | 46,826 | 66 | 1.41 | 3.32 |
| 1915, | 131,296 | 527 | 4.01 | 169,597 | 46,043 | 61 | 1.32 | 3.32 |
| Totals and averages, .. | 647,880 | 2,731 | 4.22 | 163,873 | 234,104 | 381 | 1.63 | 3.53 |

*Year of the big strike, when an average of only 116 days was worked by the collieries.

TABLE 11.—Fatal accidents inside the mines, employees, production in net tons, fatalities per 1,000 employees, production per fatality, by companies, 1911-1915, inclusive

| Companies | Employees inside | Fatal accidents inside | Fatalities inside per 1,000 employees | Production | Production per fatality inside |
|--|------------------|------------------------|---------------------------------------|--------------------|--------------------------------|
| Philadelphia and Reading Coal and Iron Co., | 95,009 | 345 | 3.63 | 59,873,119 | 173,545 |
| Delaware, Lackawanna and Western Railroad Co., | 81,377 | 314 | 3.86 | 50,460,928 | 160,704 |
| Lehigh Valley Coal Co., | 55,822 | 278 | 4.98 | 43,607,658 | 156,862 |
| Delaware and Hudson Co., | 56,094 | 239 | 4.26 | 37,319,016 | 156,147 |
| Pennsylvania Coal Co., | 45,169 | 181 | 4.01 | 30,711,629 | 169,678 |
| Lehigh and Wilkes-Barre Coal Co., | 41,429 | 196 | 4.73 | 30,615,522 | 156,202 |
| Susquehanna Coal Co., | 41,413 | 158 | 3.81 | 25,724,925 | 162,816 |
| Lehigh Coal and Navigation Co., | 28,260 | 109 | 3.85 | 22,833,744 | 209,484 |
| Totals, | 444,698 | 1,820 | 4.09 | 301,146,521 | 165,465 |
| Scranton Coal Co., | 19,804 | 107 | 5.40 | 11,530,144 | 107,758 |
| Kingston Coal Co., | 12,252 | 61 | 4.90 | 9,738,091 | 159,641 |
| Hillside Coal and Iron Co., | 13,713 | 46 | 3.35 | 8,875,716 | 192,950 |
| Hudson Coal Co., | 13,566 | 48 | 3.54 | 8,386,730 | 174,724 |
| Coxe Brothers and Co., Inc., | 7,793 | 20 | 2.57 | 8,234,291 | 411,715 |
| G. B. Markle Co., | 8,424 | 25 | 2.97 | 8,045,115 | 321,305 |
| Temple Coal Co., | 5,340 | 19 | 3.56 | 3,659,880 | 192,625 |
| West End Coal Co., | 4,754 | 17 | 3.58 | 3,515,494 | 206,703 |
| Pardee Brothers and Co., Inc., | 3,432 | 5 | 1.46 | 3,485,727 | 697,147 |
| Price-Pancoast Coal Co., | 5,822 | 92 | 15.80 | 3,324,237 | 36,133 |
| A. Pardee and Co., | 5,111 | 7 | 1.37 | 3,307,705 | 472,529 |
| Forty-Fort Coal Co., | 5,864 | 24 | 4.08 | 3,255,714 | 135,654 |
| Jermyn and Co., | 3,596 | 9 | 2.50 | 2,967,957 | 327,551 |
| C. M. Dodson and Co., | 2,698 | 15 | 5.56 | 2,183,779 | 145,585 |
| Saint Clair Coal Co., | 2,243 | 10 | 4.46 | 2,037,850 | 203,789 |
| Lytle Coal Co., | 2,950 | 13 | 4.41 | 2,011,675 | 156,282 |
| Lackawanna Coal Co., Limited, | 3,249 | 14 | 4.34 | 2,027,501 | 144,821 |
| Totals, | 120,611 | 532 | 4.41 | 86,607,656 | 162,796 |
| Mount Lookout Coal Co., | 3,110 | 18 | 5.79 | 1,948,243 | 108,236 |
| Thomas Colliery Co., | 1,462 | 11 | 7.52 | 1,850,879 | 168,262 |
| Dodson Coal Co., | 2,145 | 8 | 3.73 | 1,813,387 | 226,673 |
| Pine Hill Coal Co., | 2,510 | 14 | 5.58 | 1,811,771 | 129,412 |
| Midvalley Coal Co., | 1,855 | 4 | 2.16 | 1,751,226 | 437,806 |
| Maryd Coal Co., | 1,737 | 13 | 7.48 | 1,739,344 | 133,796 |
| Alden Coal Co., | 2,796 | 6 | 2.15 | 1,704,111 | 284,018 |
| Haddock Mining Co., | 2,857 | 11 | 3.86 | 1,661,955 | 151,005 |
| Oak Hill Coal Co., | 2,415 | 24 | 9.94 | 1,626,162 | 67,777 |
| Harleigh-Brookwood Coal Co., | 2,385 | 17 | 7.13 | 1,574,947 | 92,644 |
| Estate A. S. Van Winkle, | 2,063 | 5 | 2.42 | 1,547,917 | 309,589 |
| Greenough Red Ash Coal Co., | 1,959 | 11 | 5.62 | 1,466,637 | 133,331 |
| Colonial Collieries Co., | 1,875 | 5 | 2.67 | 1,454,182 | 290,836 |
| Mount Jessup Coal Co., Limited, | 2,206 | 6 | 2.72 | 1,436,497 | 239,401 |
| Excelsior Coal Co., | 2,361 | 12 | 5.08 | 1,404,772 | 117,064 |
| Ruck Run Coal Co., | 1,951 | 7 | 3.59 | 1,345,515 | 192,188 |
| Harwood Coal Co., | 1,627 | 2 | 1.23 | 1,244,455 | 622,227 |
| Red Ash Coal Co., | 1,691 | 4 | 2.37 | 1,220,109 | 305,027 |
| Moosic Mountain Coal Co., | 1,896 | 8 | 4.22 | 1,216,795 | 152,099 |
| Shipman Coal Co., | 1,695 | 10 | 5.90 | 1,181,201 | 118,120 |
| Girard Mammoth Coal Co., | 643 | 2 | 3.11 | 1,065,235 | 532,617 |
| Totals, | 43,229 | 198 | 4.58 | 32,064,180 | 161,940 |

TABLE 11.—Continued

| Companies | Employees inside | Fatal accidents inside | Fatalities inside per 1,000 employees | Production | Production per fatality inside |
|---|------------------|------------------------|---------------------------------------|-------------|--------------------------------|
| Northern Anthracite Coal Co., | 975 | 4 | 4.10 | 994,257 | 248,564 |
| East Boston Coal Co., | 1,735 | 9 | 5.18 | 955,892 | 106,710 |
| Peoples Coal Co., | 1,678 | 9 | 5.36 | 935,480 | 103,942 |
| Enterprise Coal Co., | 1,396 | 4 | 2.87 | 922,114 | 233,028 |
| Wilkes-Barre Anthracite Coal Co., | 1,469 | 13 | 8.85 | 828,558 | 63,735 |
| Raub Coal Co., | 1,644 | 9 | 5.47 | 814,766 | 90,529 |
| John S. Wentz and Co., | 757 | 2 | 2.64 | 735,813 | 367,906 |
| Mill Creek Coal Co., | 717 | 3 | 4.18 | 722,144 | 240,715 |
| M. S. Kennemer and Co., | 900 | 1 | 1.11 | 678,928 | 678,928 |
| Archbald Coal Co., | 1,230 | 14 | 11.38 | 667,833 | 47,702 |
| Buck Ridge Coal Mining Co., | 1,435 | 9 | 6.27 | 661,258 | 73,685 |
| Trevorton Colliery Co., | 1,042 | 1 | .96 | 645,293 | 645,293 |
| George F. Lee Coal Co., | 1,233 | 5 | 4.04 | 589,695 | 117,939 |
| Dolph Coal Co., Limited, | 1,330 | 2 | 1.50 | 582,975 | 291,487 |
| Darkwater Coal Co., | 682 | 4 | 5.86 | 580,360 | 145,090 |
| Hazle Mountain Coal Co., | 911 | 3 | 3.29 | 564,114 | 188,038 |
| Green Ridge Coal Co., | 814 | 3 | 3.69 | 527,596 | 175,865 |
| O'Boyle-Foy Anthracite Coal Co., | 720 | 3 | 4.17 | 521,998 | 173,999 |
| Totals, | 20,674 | 98 | 4.74 | 12,941,074 | 132,054 |
| Miscellaneous companies, | 18,748 | 83 | 4.43 | 14,772,677 | 177,984 |
| Grand totals and averages, | 647,880 | 2,731 | 4.22 | 447,532,108 | 163,873 |

Note.—This table covers a period of five years, 1911 to 1915 inclusive, and shows the total production for the several companies, the total number of inside employees, the number of lives lost inside for each company, the fatalities inside per 1,000 employees and the average production per life lost inside for each company. The companies have been placed in five groups. The first group comprises eight companies that produced over 20,000,000 tons each in the five years. Their total production was 391,146,521 tons. The number of employees inside was 444,608. The number of fatalities inside was 1,820 or 4.09 per 1,000 employees. The production per life lost inside was 165,465 tons.

The second group comprises seventeen companies that produced over 2,000,000 tons each. Their total production was 86,607,656 tons. The number of employees inside was 120,611. The number of fatalities inside was 532 or 4.41 per 1,000 inside employees. The production per life lost inside was 162,796 tons.

The third group comprises twenty-one companies that produced over 1,000,000 tons each. Their total production was 32,064,180 tons. The number of employees inside was 43,233. The number of fatalities inside was 198 or 4.58 per 1,000 employees. The production per life lost inside was 161,940 tons.

The fourth group comprises eighteen companies that produced over 500,000 tons each. Their total production was 12,941,074 tons. The number of employees inside was 20,674. The number of fatalities inside was 98 or 4.74 per 1,000 employees. The production per life lost inside was 132,054 tons.

The fifth group (miscellaneous companies), comprises eighteen companies that produced less than 500,000 tons each. Their total production was 14,772,677 tons. The number of employees inside was 18,748. The number of fatalities inside was 83 or 4.43 per 1,000 employees. The production per life lost inside was 177,984 tons.

The total production of all the companies for the five years was 447,532,108 tons. The number of employees inside was 647,880. The number of fatalities inside was 2,731, an average of 4.22 per 1,000 employees. The production per life lost inside was 163,873 tons.

Several of the smaller companies have very commendable records, having produced from 400,000 tons to 697,000 tons per life lost inside. Other records, however, are open to criticism, as the production was as low as 67,000 tons per fatal accident inside.

No further comment is necessary regarding these figures as they speak for themselves. It is a fact, however, that a great effort has been made in recent years to reduce the accidents inside of the anthracite mines, and while the efforts have met with some success, the public generally does not appreciate what has been done.

In considering this table, it should be borne in mind that during the five years for which the figures are given, several catastrophes of an unusual character occurred, by which the average number of fatalities for some of the companies was materially affected.

In 1911, 72 persons were suffocated from a mine fire at the Pinceault Colliery of the Preece-Pence Coal Company. Deducting the fatalities caused by this catastrophe from the total number charged against this company, leaves only 22 inside for the five years.

In 1912, 6 persons were killed by an explosion of dynamite at the Parrish Colliery of the Parrish Coal Company, now the Lehigh and Wilkes-Barre Coal Company.

In 1913, 20 persons were killed by an explosion of gas at the East Brookside Colliery of the Philadelphia and Reading Coal and Iron Company.

In 1914, 13 persons were killed by falling down a shaft at the Diamond Colliery of the Delaware, Lackawanna and Western Railroad Company; 7 were killed by an explosion of gas at the Lansford Colliery of the Lehigh Coal and Navigation Company and 4 were killed by falling down a shaft at the Maryland Colliery of the Maryland Coal Company.

In 1915, 13 persons were killed by an explosion of gas at the Prospect Colliery of the Lehigh Valley Coal Company.

TABLE 12.—Companies that had no fatal accidents, 1910-1915, inclusive

| Names of Companies | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | Total production without fatalities |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---|
| | Production in tons of 2,000 pounds | Production in tons of 2,000 pounds | Production in tons of 2,000 pounds | Production in tons of 2,000 pounds | Production in tons of 2,000 pounds | Production in tons of 2,000 pounds | |
| Mount Hope Coal Co., | 95,240 | 96,628 | 71,682 | 50,113 | 134,592 | 143,778 | 598,038 |
| H. H. Smith and Co., | 87,928 | 103,674 | 58,416 | 78,070 | 93,187 | 100,862 | 519,337 |
| Economy Light, Heat and Power Co., | 44,809 | 42,940 | 46,875 | 32,609 | 114,730 | 115,315 | 396,268 |
| Bulls Head Coal Co., | 29,667 | 23,221 | 30,656 | 39,750 | 56,130 | 65,931 | 239,356 |
| Carbondale Coal Mining Co., | 28,483 | 26,853 | 31,553 | 25,473 | 31,829 | 37,734 | 191,965 |
| South Side Coal Co., ..... | ..... | ..... | ..... | 76,797 | 65,270 | 49,033 | 185,100 |
| Gorman and Campion, | 14,983 | 26,312 | 22,314 | 23,394 | 32,381 | 15,523 | 150,107 |
| Emperor Coal Co., ..... | ..... | ..... | ..... | ..... | *63,353 | 61,177 | 124,530 |
| Butcher Creek Coal Co., | 14,560 | 25,200 | 19,871 | 18,063 | 14,961 | 17,940 | 110,575 |
| Beaver Valley Coal Co., | 17,035 | ..... | 5,077 | 6,748 | 22,635 | 29,327 | 88,822 |
| Central Coal Co., ..... | ..... | ..... | ..... | ..... | *5,165 | 33,385 | 38,554 |
| Thomas R. Reese and Son, | 4,043 | 5,821 | 6,225 | 3,984 | 4,658 | 5,333 | 30,034 |
| Wachua-Taylor Anthracite Coal Co., ..... | ..... | ..... | 10,489 | 7,675 | 6,269 | 1,498 | 25,931 |
| Shamokin Red Ash Coal Co., ..... | ..... | ..... | ..... | ..... | ..... | *23,679 | 23,699 |
| Plymouth Red Ash Coal Co., ..... | ..... | ..... | ..... | ..... | *3,427 | 16,028 | 19,455 |
| Seranton Anthracite Coal Co., ..... | ..... | ..... | ..... | ..... | ..... | *14,009 | 14,000 |
| Black Heath Coal Co., ..... | ..... | ..... | ..... | 5,507 | 3,414 | 4,956 | 13,877 |
| Elmer Neyer, ..... | ..... | ..... | ..... | ..... | 15,192 | 3,780 | 8,922 |
| Spruks Coal Co., ..... | ..... | ..... | ..... | ..... | ..... | *4,513 | 4,513 |
| Totals, | 323,719 | 351,109 | 303,158 | 384,188 | 657,872 | 703,796 | 2,783,312 |

*New operation.

†Formerly operated by Moses Neyer.

TABLE 13.—Average number of days worked by breakers, total production and average production per day, 1899-1915, inclusive

| Years | Average number of days worked | Production in tons of 2,000 pounds | Average production per day, excluding washery production | Production from wash- eries (net tons) |
|-------------|-------------------------------|---------------------------------------|--|---|
| 1899, | 179 | 60,518,321 | 332,195 | 11,055,425 |
| 1900, | 179 | 57,363,296 | 315,598 | 1,818,170 |
| 1901, | 195 | 67,094,665 | 333,763 | 2,009,864 |
| 1902, | *116 | 41,340,935 | 330,870 | 2,965,792 |
| 1903, | 211 | 75,232,555 | 337,090 | 4,119,258 |
| 1904, | 213 | 73,594,369 | 329,361 | 3,440,420 |
| 1905, | 208 | 78,647,030 | 359,371 | 3,897,683 |
| 1906, | 206 | 72,139,510 | 326,413 | 4,850,402 |
| 1907, | 227 | 86,056,412 | 354,393 | 5,630,169 |
| 1908, | 211 | 83,543,243 | 373,968 | 4,635,923 |
| 1909, | 205 | 80,223,833 | 365,928 | 5,206,562 |
| 1910, | 212 | 83,683,994 | 369,707 | 5,412,167 |
| 1911, | 234 | 90,917,176 | 369,597 | 4,555,457 |
| 1912, | 220 | 84,426,869 | 364,155 | 4,317,161 |
| 1913, | 242 | 91,626,904 | 366,499 | 2,434,157 |
| 1914, | *229 | 91,189,641 | 386,467 | 2,702,537 |
| 1915, | 221 | 89,377,706 | 388,956 | 3,418,427 |

*Strike during the year.

†Washeries worked during the strike.

‡The production from washeries is not included in the production per day.

Note.—During 1899 the first year covered by this Table, the average number of days worked by breakers was only 179 and the daily production outside of the coal produced by washeries was 332,195 tons. During 1904, the average number of days worked by breakers had increased to 213 and the total production had decreased to 329,361 tons, a difference of 2,834 tons. During 1909 the average number of days worked by breakers was 205 and the daily production was 335,538 tons, an increase in the daily production over 1899 of 33,743 tons. During 1915 the average number of days worked by breakers was 221 and the daily production exclusive of washery coal was 388,956 tons, an increase over 1899 of 46,761 tons. It is not expected that there will be any great increase in the daily production of anthracite, but with an average of 400,000 tons a day, 22 days a month or 264 days a year, the annual production will amount to 108,600,000 tons, but it is doubtful if the production of anthracite will exceed 110,000,000 tons.

TABLE AA.—Part 1.—Number of net tons of coal mined, number of days worked, number of persons employed, number of fatal and non-fatal accidents, quantity of explosives used, etc., 1899-1915, inclusive

| Districts | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employes | Total production in tons of 2,000 pounds | Average number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | | Number of horses and mules |
|---------------|--|--|---|--|-------------------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|--------|----------------------------|
| | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| First. | 4,262,303 | 414,440 | 52,869 | 4,729,612 | 221 | 9,118 | 38 | 80 | 3,488,560 | 736,546 | 82,493 | 682 | |
| Second. | 3,881,526 | 472,140 | 103,709 | 4,457,375 | 202 | 9,107 | 33 | 59 | 4,307,260 | 452,527 | 29,040 | 668 | |
| Third. | 3,459,931 | 267,234 | 64,647 | 3,891,912 | 216 | 7,669 | 26 | 59 | 3,702,975 | 179,180 | 789,275 | 669 | |
| Fourth. | 3,725,580 | 146,814 | 186,531 | 4,028,925 | 215 | 8,674 | 29 | 42 | 4,277,882 | 325,726 | 7,203 | 671 | |
| Fifth. | 3,157,973 | 290,169 | 48,574 | 3,496,856 | 224 | 6,641 | 15 | 41 | 2,788,100 | 97,422 | 95,080 | 456 | |
| Sixth. | 5,392,294 | 507,485 | 64,632 | 5,964,411 | 238 | 12,522 | 48 | 76 | 5,775,350 | 266,700 | 161,450 | 1,100 | |
| Seventh. | 5,227,371 | 631,570 | 339,202 | 6,198,043 | 207 | 11,463 | 65 | 104 | 3,581,195 | 420,244 | 420,183 | 1,315 | |
| Eighth. | 3,613,127 | 482,561 | 108,375 | 4,204,063 | 238 | 8,722 | 24 | 37 | 2,908,295 | 1,043,415 | 137,515 | 1,042 | |
| Ninth. | 4,999,013 | 486,724 | 156,988 | 5,642,725 | 213 | 10,139 | 41 | 40 | 2,929,945 | 128,973 | 330,553 | 1,052 | |
| Tenth. | 5,079,452 | 468,030 | 72,374 | 5,619,856 | 229 | 11,014 | 26 | 28 | 2,804,925 | 335,299 | 634,129 | 646 | |
| Eleventh. | 5,815,744 | 797,785 | 254,230 | 6,867,759 | 246 | 11,543 | 28 | 54 | 331,900 | 2,693,960 | 18,457 | 903 | |
| Twelfth. | 2,516,075 | 474,650 | 44,852 | 3,035,577 | 212 | 6,763 | 11 | 12 | 653,425 | 614,171 | 190,377 | 497 | |
| Thirteenth. | 3,066,802 | 486,443 | 69,675 | 3,613,920 | 222 | 6,962 | 30 | 45 | 479,680 | 351,660 | 356,616 | 466 | |
| Fourteenth. | 2,691,434 | 632,941 | 92,941 | 3,390,316 | 201 | 6,761 | 16 | 45 | 86,225 | 1,212,461 | 300,582 | 462 | |
| Fifteenth. | 3,530,777 | 326,060 | 85,168 | 3,937,905 | 204 | 7,453 | 17 | 92 | 3,484,370 | 1,043,422 | 52,582 | 632 | |
| Sixteenth. | 2,739,097 | 290,477 | 75,307 | 3,084,881 | 200 | 7,462 | 22 | 47 | 1,377,575 | 564,432 | 497,536 | 519 | |
| Seventeenth. | 4,592,756 | 646,083 | 34,028 | 5,272,872 | 225 | 9,352 | 28 | 17 | 44,525 | 1,499,417 | 495,536 | 557 | |
| Eighteenth. | 3,115,697 | 385,778 | 38,220 | 3,539,693 | 231 | 6,352 | 25 | 52 | 226,065 | 818,420 | 553,435 | 557 | |
| Nineteenth. | 3,259,240 | 571,834 | 48,632 | 3,879,706 | 255 | 7,391 | 30 | 37 | 342,350 | 1,017,138 | 529,232 | 584 | |
| Twentieth. | 1,731,749 | 465,083 | 45,435 | 2,302,272 | 208 | 5,806 | 14 | 38 | 126,025 | 520,114 | 210,114 | 487 | |
| Twenty-first. | 3,002,082 | 302,263 | 62,077 | 3,367,432 | 203 | 6,973 | 22 | 46 | 2,428,350 | 662,735 | 37,700 | 583 | |
| Totals, 1915. | 77,573,441 | 9,815,643 | 1,983,622 | 89,377,706 | 221 | 177,329 | 588 | 995 | 42,765,060 | 15,376,447 | 5,577,707 | 14,390 | |

TABLE AA.—Part 1.—Continued

| Years | Explosives | | Number of non-fatal accidents | Number of fatal accidents | Number of employees | Average number of days worked | Total production in tons of 2,000 pounds | Number of tons sold to local trade and used by employees | Number of tons used at collieries for steam and heat | Number of tons of coal shipped to market | |
|-------|----------------------------|---|-------------------------------|---------------------------|---------------------|-------------------------------|--|--|--|--|-----------------------------------|
| | Number of horses and mules | Number of pounds of permissible explosives used | | | | | | | | | |
| | | | | | | | | | | | Number of pounds of dynamite used |
| | | | | | | | | | | | |
| 1914. | 14,868 | 4,246,347 | 1,038 | 600 | 180,899 | 229 | 91,189,641 | 1,967,394 | 9,512,372 | 79,713,875 | |
| 1913. | 15,109 | 3,321,615 | 1,125 | 624 | 175,310 | 242 | 91,636,961 | 1,941,238 | 9,237,762 | 80,325,964 | |
| 1912. | 15,197 | 2,617,026 | 976 | 691 | 175,098 | 229 | 175,869 | 2,160,066 | 8,804,759 | 73,462,014 | |
| 1911. | 15,628 | 2,122,264 | 1,124 | 699 | 173,328 | 234 | 90,917,176 | 1,990,093 | 8,152,073 | 79,775,010 | |
| 1910. | 15,847 | 1,506,140 | 1,050 | 601 | 168,175 | 212 | 83,651,994 | 1,868,369 | 8,366,895 | 77,418,729 | |
| 1909. | 15,607 | 666,857 | 1,074 | 567 | 171,195 | 205 | 89,221,833 | 1,865,284 | 8,107,810 | 70,314,739 | |
| 1908. | 16,872 | ..... | 1,179 | 678 | 175,503 | 211 | 83,543,243 | 1,715,889 | 8,240,032 | 73,597,322 | |
| 1907. | 16,837 | ..... | 1,369 | 708 | 165,774 | 227 | 86,036,112 | 1,700,399 | 8,217,439 | 76,138,661 | |
| 1906. | 17,125 | ..... | 1,212 | 683 | 166,379 | 206 | 72,136,510 | 1,522,454 | 7,198,140 | 73,418,916 | |
| 1905. | 17,562 | ..... | 1,232 | 551 | 168,175 | 208 | 78,617,050 | 1,590,556 | 7,122,394 | 63,944,070 | |
| 1904. | 17,562 | ..... | 1,232 | 551 | 168,175 | 208 | 78,617,050 | 1,590,556 | 7,122,394 | 63,944,070 | |
| 1903. | 17,562 | ..... | 1,232 | 551 | 168,175 | 208 | 78,617,050 | 1,590,556 | 7,122,394 | 63,944,070 | |
| 1902. | 17,562 | ..... | 1,232 | 551 | 168,175 | 208 | 78,617,050 | 1,590,556 | 7,122,394 | 63,944,070 | |
| 1901. | 17,562 | ..... | 1,232 | 551 | 168,175 | 208 | 78,617,050 | 1,590,556 | 7,122,394 | 63,944,070 | |
| 1900. | 17,562 | ..... | 1,232 | 551 | 168,175 | 208 | 78,617,050 | 1,590,556 | 7,122,394 | 63,944,070 | |
| 1899. | 17,562 | ..... | 1,232 | 551 | 168,175 | 208 | 78,617,050 | 1,590,556 | 7,122,394 | 63,944,070 | |

TABLE AA.—Part 2, 1915

[illegible]

TABLE A.—Continued

| Occupations of Employees | Districts | | | | | | | | | | Grand totals inside and outside |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------------------|
| | Twelfth | Thirteenth | Fourteenth | Fifteenth | Sixteenth | Seventeenth | Eighteenth | Nineteenth | Twentieth | Twenty-first | |
| Inside | | | | | | | | | | | |
| Mine foremen, | 12 | 14 | 28 | 15 | 15 | 26 | 16 | 22 | 12 | 22 | 435 |
| Assistant foremen, | 109 | 79 | 97 | 43 | 61 | 29 | 60 | 67 | 31 | 25 | 1,098 |
| Fire bosses and assistants, | 1,481 | 1,461 | 1,273 | 2,197 | 2,284 | 1,974 | 1,883 | 1,938 | 1,489 | 1,481 | 46,982 |
| Miners' laborers, | 1,465 | 1,211 | 1,146 | 756 | 943 | 507 | 500 | 870 | 1,489 | 1,910 | 46,982 |
| Drivers and runners, | 282 | 231 | 185 | 320 | 351 | 260 | 267 | 312 | 255 | 1,444 | 36,379 |
| Doorknobs and helpers, | 67 | 24 | 76 | 64 | 49 | 72 | 68 | 43 | 63 | 103 | 10,618 |
| Pumpmen, | 27 | 37 | 58 | 77 | 80 | 24 | 32 | 53 | 44 | 67 | 2,666 |
| Company men, | 462 | 488 | 230 | 281 | 446 | 2,121 | 520 | 564 | 332 | 370 | 14,546 |
| All other employees, | 1,294 | 889 | 1,098 | 1,690 | 1,054 | 1,236 | 606 | 1,098 | 1,516 | 390 | 16,935 |
| Totals, | 4,759 | 4,455 | 4,403 | 4,904 | 5,337 | 6,406 | 4,413 | 4,989 | 4,295 | 5,022 | 131,296 |
| Outside | | | | | | | | | | | |
| Superintendents, | 1 | 7 | 5 | 5 | 4 | 5 | 8 | 11 | 2 | 13 | 118 |
| Foremen, | 18 | 23 | 26 | 16 | 18 | 26 | 20 | 26 | 15 | 17 | 416 |
| Blacksmiths and carpenters, | 78 | 155 | 154 | 251 | 101 | 251 | 131 | 148 | 96 | 131 | 3,111 |
| Engineers and firemen, | 274 | 343 | 329 | 293 | 289 | 314 | 252 | 375 | 307 | 235 | 6,096 |
| Shatepickers (boys), | 283 | 314 | 227 | 411 | 367 | 208 | 217 | 315 | 107 | 261 | 6,339 |
| Shatepickers (men), | 87 | 145 | 78 | 62 | 65 | 215 | 49 | 130 | 19 | 301 | 3,049 |
| Bookkeepers and clerks, | 42 | 38 | 38 | 53 | 56 | 52 | 39 | 49 | 28 | 35 | 589 |
| All other employees, | 1,221 | 1,463 | 1,551 | 1,872 | 1,225 | 1,865 | 1,213 | 1,328 | 967 | 954 | 25,995 |
| Totals, | 2,004 | 2,508 | 2,448 | 1,820 | 2,125 | 2,946 | 1,939 | 2,402 | 1,541 | 1,951 | 46,013 |
| Grand totals inside and outside, | 6,763 | 6,963 | 6,851 | 6,724 | 7,462 | 9,352 | 6,352 | 7,391 | 5,836 | 6,973 | 177,339 |

Note.—Generally speaking the employees in and about the mines are designated "miners" by persons not familiar with mine operations. The fact is, however, that only a small portion of the total number of mine employees are miners. Of the 131,296 inside employees shown on this table and generally regarded as miners, only about 46,422 or 35.5 per cent. are employed at the face of the workings or in the removal of pillars. The other 64.5 per cent. are employed at other occupations, which will be covered in another table.

Since 1913 a large increase has been made in the force of inside foremen and fire bosses. In 1913 these officials, who really have full charge of the inside work, numbered 2,283, while in 1915 the number had been increased to 2,516, a difference of 233. In 1913 there were 1,000 employees inside work, numbered 4,327, and in 1915, 4,001. This percentage of fatalities was a fair average for the kind of work performed inside the anthracite mines. The fatalities per 1,000 employees in the bituminous mines in 1915 were 2.61. The Pennsylvania record is excellent and equal to that of Great Britain. It is expected that 1916 will show a reduced percentage of fatalities inside, one reason being an increase in the number of State mine inspectors from 21 to 25. Another reason is the great number of special inspectors named by the various insurance companies to guard their interests. With the additional State inspectors and the special inspectors of the insurance companies, there is reason to hope for a material reduction in accidents, both fatal and non-fatal.

TABLE B. —Continued

| Causes of Fatal Accidents | Districts | | | | Percentages for 1904 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------------|-----------|--------------|--------|---------------------------------|--------|--------|--------|--------|---------------------------------|--------|--------|--------|--------|----------------------|--------|--|--|--|----------------------|--|--|--|--|----------------------|--|--|--|--|----------------------|--|--|--|--|
| | Nineteenth | Twentieth | Twenty-first | Totals | Percentages for 1905 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Percentages for 1906 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Percentages for 1907 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | Percentages for 1908 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percentages for 1909 | | | | | Percentages for 1910 | | | | | Percentages for 1911 | | | | | Percentages for 1912 | | | | | Percentages for 1913 | | | | | Percentages for 1914 | | | | | Percentages for 1915 | | | | |
| Inside | | | | | Outside | | | | | Grand totals inside and outside | | | | | | | | | | | | | | | | | | | | | | | | |
| Falls of coal, slate and roof, | 13 | 7 | 12 | 268 | 50.85 | 43.26 | 46.86 | 49.40 | 41.14 | 49.71 | 51.84 | 47.65 | 46.42 | 46.93 | 53.44 | 47.98 | | | | | | | | | | | | | | | | | | |
| Mine cars, | 5 | 3 | 6 | 81 | 15.37 | 14.23 | 15.44 | 15.06 | 14.36 | 18.07 | 14.49 | 15.10 | 14.61 | 14.69 | 14.88 | 14.31 | | | | | | | | | | | | | | | | | | |
| Explosions of gas, | 4 | ..... | ..... | 33 | 6.26 | 8.05 | 8.62 | 8.05 | 5.53 | 3.93 | 5.71 | 5.67 | 7.32 | 7.10 | 5.99 | 6.05 | | | | | | | | | | | | | | | | | | |
| Suffocations by gas, etc., ..... | ..... | ..... | ..... | 10 | 1.90 | 2.25 | 2.69 | 1.01 | 13.98 | 2.75 | 3.47 | 3.67 | 3.33 | 3.43 | 3.99 | 4.01 | | | | | | | | | | | | | | | | | | |
| Explosions of powder and dynamite, ..... | ..... | ..... | ..... | 18 | 1.52 | 2.44 | 1.97 | 5.02 | 4.42 | 2.45 | 4.49 | 3.86 | 2.83 | 6.14 | 2.91 | 7.06 | | | | | | | | | | | | | | | | | | |
| Blasts, premature and otherwise, | 1 | ..... | 2 | 69 | 13.09 | 14.23 | 11.13 | 10.24 | 10.89 | 11.79 | 9.59 | 11.58 | 11.65 | 11.62 | 7.99 | 8.86 | | | | | | | | | | | | | | | | | | |
| Falling into shafts, slopes, etc., | 1 | ..... | ..... | 12 | 2.28 | 8.80 | 5.39 | 3.61 | 3.42 | 3.73 | 3.67 | 3.69 | 4.16 | 4.39 | 7.80 | 5.24 | | | | | | | | | | | | | | | | | | |
| Falling from scaffolds, ..... | ..... | ..... | ..... | 3 | 5.57 | 5.56 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Crushed at batteries, ..... | ..... | ..... | ..... | 3 | 5.57 | 5.56 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Crushed by mules, etc., ..... | ..... | ..... | ..... | 1 | 1.19 | 37 | 5.4 | 40 | 81 | 59 | 1.28 | ..... | 1.33 | ..... | ..... | 1.21 | | | | | | | | | | | | | | | | | | |
| Kicked by mules, etc., ..... | ..... | ..... | ..... | 1 | 1.19 | 37 | 5.4 | 40 | 81 | 59 | 1.28 | ..... | 1.33 | ..... | ..... | 1.21 | | | | | | | | | | | | | | | | | | |
| Machinery, ..... | ..... | ..... | ..... | 4 | 7.76 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Electricity, ..... | ..... | ..... | ..... | 4 | 7.76 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Miscellaneous, | 1 | 3 | ..... | 37 | 7.02 | 5.06 | 6.28 | 5.82 | 4.39 | 3.93 | 3.47 | 6.54 | 7.16 | 3.73 | 4.17 | 6.65 | | | | | | | | | | | | | | | | | | |
| Totals, | 25 | 13 | 21 | 527 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | | | | | | | | | | | | | | | | | | |
| Outside | | | | | Grand totals inside and outside | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cars, | 3 | 1 | ..... | 28 | 45.90 | 50.00 | 55.23 | 39.81 | 30.95 | 43.48 | 33.77 | 42.68 | 44.86 | 35.65 | 24.72 | 43.44 | | | | | | | | | | | | | | | | | | |
| Machinery, ..... | ..... | ..... | ..... | 16 | 16.39 | 18.18 | 17.91 | 19.12 | 25.19 | 27.17 | 25.97 | 35.37 | 27.10 | 22.77 | 25.48 | 15.15 | | | | | | | | | | | | | | | | | | |
| Suffocations in chutes, etc., ..... | ..... | ..... | ..... | 3 | 4.92 | ..... | 2.98 | 11.65 | 9.53 | 9.18 | 12.99 | 1.22 | 2.80 | 8.91 | 11.83 | 8.08 | | | | | | | | | | | | | | | | | | |
| Ball bearings, ..... | ..... | ..... | ..... | 8 | 3.28 | ..... | ..... | ..... | ..... | ..... | ..... | 1.22 | ..... | ..... | 1.08 | 2.02 | | | | | | | | | | | | | | | | | | |
| Electricity, ..... | ..... | ..... | ..... | 1 | 1.64 | 1.52 | 1.49 | 1.94 | 1.19 | ..... | 1.22 | 1.87 | ..... | ..... | ..... | ..... |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Miscellaneous, | 2 | ..... | 1 | 17 | 27.87 | 30.30 | 22.39 | 27.18 | 30.95 | 27.17 | 27.27 | 18.29 | 22.43 | 31.68 | 26.88 | 31.31 | | | | | | | | | | | | | | | | | | |
| Totals, | 5 | 1 | 1 | 61 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | | | | | | | | | | | | | | | | | | |
| Grand totals inside and outside, | 30 | 14 | 22 | 588 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Note. This table gives a detailed statement of fatalities for the year 1915 with the percentages for the years 1904 to 1915, inclusive. A comparison of the fatalities for the 12 years shows that the percentage is about the same as for the year 1915. The percentage per year from falls, 14.7%; from cars, 13.15%; from explosions of gas, 9%; from suffocations from explosions, 3.28%; from explosives, 3.88%; from blasts, 10.89; falling into shafts, slopes and otherwise, 8.25 per cent. On the whole, the percentage of fatalities due to machinery is 23.09 per cent. to machinery.

On the other hand, the percentage of fatalities due to cars and 23.09 per cent. to machinery.

The fatalities during 1915 made 393 widows and 885 orphans.

TABLE E.—Quantity of coal produced by each company that produced 300,000 or more tons, and the number of persons employed, 1915

| Names of Companies | Inspection Districts | Production of coal in net tons | | | | Total number of employees | | | | Number of employees outside | | | | Number of employees inside | | | |
|--|---|--------------------------------|-------|--------|------------|---------------------------|-------|--------|------------|-----------------------------|-------|--------|------------|----------------------------|-------|--------|------------|
| | | Production of coal in net tons | | | | Total number of employees | | | | Number of employees outside | | | | Number of employees inside | | | |
| Philadelphia and Reading Coal and Iron Company, | Twelfth, Thirteenth, Fourteenth, Fifteenth, Sixteenth, Eighteenth, Nineteenth, Twentieth, | 17,707 | 7,220 | 24,927 | 11,033,100 | 17,707 | 7,220 | 24,927 | 11,033,100 | 17,707 | 7,220 | 24,927 | 11,033,100 | 17,707 | 7,220 | 24,927 | 11,033,100 |
| Delaware, Lackawanna and Western Railroad Company, | Second, Third, Fourth, Fifth, Seventh, Eighth, Ninth, Tenth, | 17,148 | 3,362 | 20,510 | 10,251,060 | 17,148 | 3,362 | 20,510 | 10,251,060 | 17,148 | 3,362 | 20,510 | 10,251,060 | 17,148 | 3,362 | 20,510 | 10,251,060 |
| Delaware and Hudson Company, | First, Second, Fourth, Sixth, Seventh, Ninth, Twentieth, | 14,496 | 4,286 | 18,782 | 9,851,529 | 14,496 | 4,286 | 18,782 | 9,851,529 | 14,496 | 4,286 | 18,782 | 9,851,529 | 14,496 | 4,286 | 18,782 | 9,851,529 |
| Lehigh Valley Coal Company, | Fifth, Sixth, Seventh, Eighth, Eleventh, Twelfth, Fourteenth, Eighteenth, Twentieth, | 11,543 | 3,846 | 15,389 | 8,574,315 | 11,543 | 3,846 | 15,389 | 8,574,315 | 11,543 | 3,846 | 15,389 | 8,574,315 | 11,543 | 3,846 | 15,389 | 8,574,315 |
| Pennsylvania Coal Company, | Third, Fifth, Sixth, | 9,988 | 2,674 | 12,662 | 6,102,517 | 9,988 | 2,674 | 12,662 | 6,102,517 | 9,988 | 2,674 | 12,662 | 6,102,517 | 9,988 | 2,674 | 12,662 | 6,102,517 |
| Leligh and Wilkes-Barre Coal Company, | Seventh, Ninth, Tenth, Eighteenth, | 8,269 | 2,341 | 10,610 | 5,915,453 | 8,269 | 2,341 | 10,610 | 5,915,453 | 8,269 | 2,341 | 10,610 | 5,915,453 | 8,269 | 2,341 | 10,610 | 5,915,453 |
| Susquehanna Coal Company, | Tenth, Thirteenth, Fifteenth, Sixteenth, Twentieth, | 8,792 | 3,762 | 12,554 | 5,009,351 | 8,792 | 3,762 | 12,554 | 5,009,351 | 8,792 | 3,762 | 12,554 | 5,009,351 | 8,792 | 3,762 | 12,554 | 5,009,351 |
| Leligh Coal and Navigation Company, | Seventeenth, | 5,645 | 2,507 | 8,152 | 4,586,022 | 5,645 | 2,507 | 8,152 | 4,586,022 | 5,645 | 2,507 | 8,152 | 4,586,022 | 5,645 | 2,507 | 8,152 | 4,586,022 |
| Scranton Coal Company, | First, Second, Third, Fourth, Twenty-first, | 3,693 | 1,315 | 5,008 | 2,161,760 | 3,693 | 1,315 | 5,008 | 2,161,760 | 3,693 | 1,315 | 5,008 | 2,161,760 | 3,693 | 1,315 | 5,008 | 2,161,760 |
| G. B. Markle Company, | Eleventh, | 1,918 | 867 | 2,785 | 1,902,590 | 1,918 | 867 | 2,785 | 1,902,590 | 1,918 | 867 | 2,785 | 1,902,590 | 1,918 | 867 | 2,785 | 1,902,590 |
| Coxe Brothers and Company, Incorporated, | Eleventh, Seventeenth, Eighteenth, | 1,696 | 779 | 2,475 | 1,806,182 | 1,696 | 779 | 2,475 | 1,806,182 | 1,696 | 779 | 2,475 | 1,806,182 | 1,696 | 779 | 2,475 | 1,806,182 |
| Ellisburg Coal and Iron Company, | First, Fifth, Sixth, Twenty-first, | 2,772 | 822 | 3,594 | 1,736,400 | 2,772 | 822 | 3,594 | 1,736,400 | 2,772 | 822 | 3,594 | 1,736,400 | 2,772 | 822 | 3,594 | 1,736,400 |
| Kingsport Coal Company, | Eight, Ninth, | 1,673 | 654 | 2,327 | 1,195,013 | 1,673 | 654 | 2,327 | 1,195,013 | 1,673 | 654 | 2,327 | 1,195,013 | 1,673 | 654 | 2,327 | 1,195,013 |
| Forty Fort Coal Company, | Eleventh, | 1,679 | 488 | 2,167 | 711,094 | 1,679 | 488 | 2,167 | 711,094 | 1,679 | 488 | 2,167 | 711,094 | 1,679 | 488 | 2,167 | 711,094 |
| Pardee Brothers and Company, Incorporated, | Tenth, | 1,629 | 386 | 2,015 | 691,712 | 1,629 | 386 | 2,015 | 691,712 | 1,629 | 386 | 2,015 | 691,712 | 1,629 | 386 | 2,015 | 691,712 |
| Temple Coal Company, | Eleventh, | 678 | 325 | 1,003 | 614,118 | 678 | 325 | 1,003 | 614,118 | 678 | 325 | 1,003 | 614,118 | 678 | 325 | 1,003 | 614,118 |
| Price-Pancoat Coal Company, | First, Twenty-first, | 923 | 260 | 1,183 | 624,700 | 923 | 260 | 1,183 | 624,700 | 923 | 260 | 1,183 | 624,700 | 923 | 260 | 1,183 | 624,700 |
| Harleigh-Brookwood Coal Company, | Third, | 1,130 | 257 | 1,387 | 569,710 | 1,130 | 257 | 1,387 | 569,710 | 1,130 | 257 | 1,387 | 569,710 | 1,130 | 257 | 1,387 | 569,710 |
| Jermya and Company, | Eleventh, Thirteenth, Fourteenth, | 768 | 435 | 1,203 | 526,056 | 768 | 435 | 1,203 | 526,056 | 768 | 435 | 1,203 | 526,056 | 768 | 435 | 1,203 | 526,056 |
| Dodson Coal Company, | Fifth, | 685 | 200 | 885 | 503,995 | 685 | 200 | 885 | 503,995 | 685 | 200 | 885 | 503,995 | 685 | 200 | 885 | 503,995 |
| C. M. Dodson and Company, | Eighteenth, | 522 | 219 | 741 | 493,895 | 522 | 219 | 741 | 493,895 | 522 | 219 | 741 | 493,895 | 522 | 219 | 741 | 493,895 |
| Marvd Coal Company, | Eleventh, | 483 | 261 | 744 | 499,255 | 483 | 261 | 744 | 499,255 | 483 | 261 | 744 | 499,255 | 483 | 261 | 744 | 499,255 |
| Thomas Colliery Company, | Eleventh, | 375 | 178 | 553 | 414,661 | 375 | 178 | 553 | 414,661 | 375 | 178 | 553 | 414,661 | 375 | 178 | 553 | 414,661 |
| Saint Clair Coal Company, | Thirteenth, | 295 | 290 | 585 | 410,846 | 295 | 290 | 585 | 410,846 | 295 | 290 | 585 | 410,846 | 295 | 290 | 585 | 410,846 |
| Blackfoot Coal Company, | Eleventh, | 353 | 348 | 701 | 410,821 | 353 | 348 | 701 | 410,821 | 353 | 348 | 701 | 410,821 | 353 | 348 | 701 | 410,821 |
| Lytle Coal Company, | Eleventh, | 683 | 158 | 841 | 389,877 | 683 | 158 | 841 | 389,877 | 683 | 158 | 841 | 389,877 | 683 | 158 | 841 | 389,877 |
| Locust Mountain Coal Company, | Ninth, Twentieth, | 601 | 864 | 1,465 | 377,375 | 601 | 864 | 1,465 | 377,375 | 601 | 864 | 1,465 | 377,375 | 601 | 864 | 1,465 | 377,375 |
| | Thirteenth, | 389 | 266 | 655 | | 389 | 266 | 655 | | 389 | 266 | 655 | | 389 | 266 | 655 | |

TABLE E.—Continued

| Names of Companies | Inspection Districts | Production of coal in net tons | | | | Total number of employees | | Number of employees outside | | Number of employees inside | |
|--|----------------------|--------------------------------|--------|---------|------------|---------------------------|--|-----------------------------|--|----------------------------|--|
| | | | | | | | | | | | |
| Alden Coal Company, | Tenth, | 588 | 193 | 781 | 369,481 | | | | | | |
| Pine Hill Coal Company, | Nineteenth, | 513 | 194 | 707 | 330,435 | | | | | | |
| Connell Anthracite Mining Company, ..... | ..... | 364 | 168 | 532 | 243,522 | | | | | | |
| Lackawanna Coal Company, Limited, | Twenty-first, | 291 | 168 | 459 | 243,522 | | | | | | |
| Midvalley Coal Company, ..... | ..... | 295 | 179 | 474 | 232,530 | | | | | | |
| Oak Hill Coal Company, | Fourteenth, | 400 | 210 | 610 | 332,461 | | | | | | |
| Buck Run Coal Company, | Nineteenth, | 451 | 141 | 592 | 320,986 | | | | | | |
| Totals, ..... | ..... | 119,161 | 40,230 | 159,391 | 80,953,546 | | | | | | |

The 36 companies named in this table, out of 115 companies in the region, produced 80,953,546 tons, or 90.58 per cent. of the total output, 89,377,706 tons.

TABLE F.—Classification of employees killed or fatally injured inside and outside the mines, 1899-1915, inclusive

| Employees Killed or Fatally Injured | 1899 | 1900 | 1901 | 1902 | 1903 | 1904 | 1905 | 1906 | 1907 | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 | Totals |
|--|------|-------|-------|-------|------|------|-------|------|-------|------|------|-------|------|------|------|------|------|--------|
| Inside | | | | | | | | | | | | | | | | | | |
| Mine foremen and assistants, | 2 | ..... | 5 | 2 | 3 | 3 | 1 | 2 | 2 | 3 | 1 | 2 | 2 | 2 | 3 | 2 | 5 | 39 |
| Fire bosses and assistants, | 2 | ..... | 5 | 2 | 2 | 2 | 2 | 6 | 2 | 3 | 2 | 2 | 2 | 5 | 1 | 4 | 1 | 51 |
| Miners, | 199 | 184 | 224 | 114 | 202 | 233 | 308 | 225 | 309 | 313 | 264 | 254 | 306 | 262 | 286 | 296 | 281 | 4,261 |
| Miners' laborers, | 114 | 95 | 122 | 62 | 110 | 145 | 148 | 133 | 136 | 154 | 126 | 147 | 147 | 117 | 148 | 126 | 143 | 2,202 |
| Drivers and runners, | 39 | 33 | 45 | 27 | 46 | 31 | 31 | 32 | 46 | 49 | 37 | 40 | 45 | 42 | 33 | 28 | 40 | 644 |
| Doorboys, etc., | 18 | 8 | 6 | 5 | 12 | 20 | 14 | 9 | 18 | 18 | 11 | 6 | 15 | 8 | 7 | 8 | 10 | 193 |
| All other employees, | 15 | 33 | 37 | 32 | 51 | 63 | 47 | 43 | 38 | 36 | 49 | 58 | 66 | 67 | 72 | 70 | 47 | 899 |
| Totals, | 339 | 358 | 441 | 245 | 426 | 496 | 551 | 456 | 691 | 596 | 490 | 509 | 615 | 498 | 587 | 534 | 527 | 8,389 |
| Outside | | | | | | | | | | | | | | | | | | |
| Foremen, | 1 | ..... | ..... | ..... | 1 | 1 | ..... | 2 | ..... | 2 | 1 | ..... | 4 | 1 | 3 | 1 | 2 | 19 |
| Blacksmiths and carpenters, | 2 | ..... | ..... | ..... | 4 | 5 | 5 | 5 | ..... | 5 | 4 | 6 | 7 | 3 | 1 | 5 | 3 | 60 |
| Engineers and firemen, | 6 | 3 | 5 | 7 | 6 | 3 | 6 | 3 | 8 | 4 | 7 | 4 | 4 | 7 | 1 | 1 | 6 | 82 |
| Slatepickers, | 10 | 9 | 9 | 12 | 9 | 11 | 24 | 14 | 16 | 14 | 7 | 8 | 8 | 5 | 3 | 2 | 5 | 166 |
| All other employees, | 53 | 40 | 58 | 34 | 72 | 79 | 58 | 77 | 82 | 57 | 58 | 74 | 63 | 87 | 59 | 53 | 45 | 1,049 |
| Totals, | 72 | 53 | 72 | 55 | 92 | 99 | 93 | 101 | 107 | 82 | 77 | 92 | 84 | 103 | 67 | 66 | 61 | 1,376 |
| Grand totals inside and outside, | 411 | 411 | 513 | 300 | 518 | 595 | 644 | 557 | 798 | 678 | 567 | 601 | 699 | 601 | 654 | 600 | 588 | 9,665 |

Note.—This table shows the number of mine foremen, assistant mine foremen, fire bosses and assistants, miners, miners' laborers, drivers, runners, doorboys, helpers and all other employees killed in each year, from 1899 to 1915 inclusive, a period of 17 years. 8,389 lives were lost inside the mines, 90 of the fatalities among the mine foremen, assistant mine foremen, and fire bosses or 1.09 per cent. of the total. 4,261 fatalities occurred among the miners or 51.41 per cent. of the inside accidents, 2,202 occurred among the miners' laborers or 26.56 per cent. The fatalities among the drivers, runners, doorboys and other employees inside numbered 1,736 or 20.94 per cent. The number of fatalities inside and outside the mines for the 17 years was 9,665, of which 8,289 or 85.76 per cent. occurred inside and 1,376 or 14.24 per cent. outside. This table gives a fair illustration of the comparative dangers encountered inside and outside the mines in the mining and preparation of anthracite coal for market.

TABLE H.—Nationality of employes killed or fatally injured inside and outside the mines, 1892-1915, inclusive

| Nationality | 1892-1895 | 1896-1900 | 1901-1905 | 1906-1910 | 1911-1915 |
|---------------------|-----------|-----------|-----------|-----------|-----------|
| American, | 310 | 404 | 617 | 618 | 691 |
| English, | 124 | 132 | 94 | 78 | 72 |
| Welsh, | 154 | 176 | 122 | 122 | 84 |
| Scotch, | 8 | 21 | 12 | 9 | 6 |
| Irish, | 287 | 332 | 212 | 159 | 114 |
| German, | 93 | 97 | 97 | 80 | 65 |
| Totals, | 976 | 1,162 | 1,154 | 1,066 | 932 |
| Polish, | 130 | 609 | 669 | 925 | 819 |
| Hungarian, | 155 | 186 | 163 | 89 | 37 |
| Italian, | 67 | 48 | 142 | 216 | 231 |
| Slavonian, | 30 | 42 | 151 | 260 | 270 |
| Lithuanian, | 17 | 36 | 152 | 321 | 386 |
| Austrian, | 20 | 39 | 84 | 17 | 123 |
| Russian, | 7 | 39 | 88 | 150 | 204 |
| Greek, | 5 | 15 | 9 | 13 | 39 |
| Swedish, | 3 | 10 | 4 | 5 | 6 |
| French, | 1 | 2 | 2 | ..... | 2 |
| Tyrolean, ..... | ..... | 3 | 9 | 13 | 8 |
| Bohemian, ..... | ..... | 1 | ..... | 3 | 4 |
| Assyrian, ..... | ..... | ..... | 1 | ..... | 1 |
| Canadian, ..... | ..... | ..... | 2 | ..... | ..... |
| Montenegrin, ..... | ..... | ..... | ..... | 13 | 3 |
| Horwat, ..... | ..... | ..... | ..... | ..... | 7 |
| Magyar, ..... | ..... | ..... | ..... | ..... | 8 |
| Bulgarian, ..... | ..... | ..... | ..... | ..... | 1 |
| Syrian, ..... | ..... | ..... | ..... | ..... | 1 |
| Croatian, ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, | 765 | 1,050 | 1,416 | 2,045 | 2,180 |
| Grand totals, | 1,741 | 2,212 | 2,570 | 3,111 | 3,112 |

TABLE I.—Production of coal; production per employe inside; quantity of explosives used and production per each pound of explosives used; 1890-1915, inclusive

| Years | Production in tons of 2,000 pounds | Average number of tons of coal produced per employe inside | Explosives | | | Average number of tons of coal produced for each pound of explosives used |
|-------------|------------------------------------|--|---------------------------------------|-----------------------------------|---|---|
| | | | Number of pounds of black powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| 1899, | 60,518,331 | 657 | 34,317,275 | 3,649,117 | ..... | 1.59 |
| 1900, | 57,363,306 | 600 | 30,929,500 | 3,454,641 | ..... | 1.67 |
| 1901, | 67,094,665 | 682 | 38,021,109 | 4,155,685 | ..... | 1.59 |
| 1902, | 41,340,925 | *182 | 21,128,675 | 2,130,685 | ..... | 1.77 |
| 1903, | 75,232,555 | †737 | 42,529,400 | 5,317,422 | ..... | 1.57 |
| 1904, | 73,594,369 | 662 | 44,779,800 | 6,519,312 | ..... | 1.43 |
| 1905, | 78,647,020 | 667 | 47,570,500 | 8,353,594 | ..... | 1.41 |
| 1906, | 72,139,510 | 627 | 40,352,075 | 7,980,733 | ..... | 1.41 |
| 1907, | 86,056,412 | 730 | 47,636,700 | 10,544,781 | ..... | 1.48 |
| 1908, | 83,543,243 | 672 | 49,380,800 | 10,766,245 | ..... | 1.39 |
| 1909, | 80,223,833 | 651 | 41,191,857 | 10,724,616 | 666,827 | 1.53 |
| 1910, | 83,683,994 | 689 | 45,112,322 | 11,171,458 | 1,506,140 | 1.45 |
| 1911, | 90,917,176 | 721 | 47,846,483 | 13,569,056 | 2,122,264 | 1.44 |
| 1912, | 84,426,869 | 661 | 41,401,015 | 13,685,062 | 2,037,026 | 1.48 |
| 1913, | 91,626,964 | 712 | 44,001,660 | 16,093,635 | 3,322,645 | 1.44 |
| 1914, | 91,189,641 | 680 | 44,336,113 | 17,244,174 | 4,216,347 | 1.29 |
| 1915, | 89,377,706 | 681 | 42,763,000 | 15,576,447 | 5,577,707 | 1.40 |

The ton of 2,000 pounds is used so that a comparison can be made with the bituminous production per pound of powder used.

*This decrease in production per employe inside was caused by the small number of days worked on account of the strike.

†The increase in production per pound of powder used was caused by the production of the washeries during the strike.

‡The increase in production per employe was due to the large production of the washeries.

TABLE J.—Number of employees inside and outside the mines by counties, 1899-1915, inclusive

| Counties | 1899 | 1900 | 1901 | 1902 | 1903 | 1904 | 1905 | 1906 | 1907 |
|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Carbon, | 3,993 | 4,242 | 4,365 | 3,805 | 4,051 | 4,467 | 4,240 | 4,469 | 4,782 |
| Columbia, | 2,302 | 2,033 | 2,329 | 2,339 | 2,236 | 2,192 | 2,368 | 2,246 | 2,295 |
| Dauphin, | 2,390 | 2,577 | 2,353 | 1,945 | 2,140 | 2,113 | 2,107 | 2,333 | 2,124 |
| Lackawanna, | 30,886 | 32,811 | 34,798 | 35,333 | 37,470 | 40,859 | 40,859 | 41,429 | 42,742 |
| Lozierne, | 50,803 | 52,015 | 53,280 | 52,766 | 55,639 | 59,136 | 60,734 | 64,441 | 58,975 |
| Northumberland, | 14,697 | 15,105 | 14,187 | 14,863 | 14,580 | 14,345 | 15,208 | 14,730 | 15,709 |
| Schuylkill, | 33,322 | 33,259 | 33,907 | 34,950 | 33,443 | 35,979 | 40,465 | 40,289 | 39,870 |
| Sullivan, | 621 | 621 | 434 | 752 | 683 | 665 | 536 | 634 | 719 |
| Susquehanna, | 1,210 | 1,231 | 1,434 | 1,386 | 1,363 | 1,322 | 1,307 | 1,320 | 1,275 |
| Wayne, | 406 | 411 | 589 | ..... | 253 | 366 | 370 | 384 | 463 |
| Totals, | 140,604 | 143,824 | 147,651 | 148,139 | 151,827 | 161,330 | 168,254 | 166,175 | 168,774 |

| Counties | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 |
|-----------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Carbon, | 5,523 | 5,155 | 5,362 | 5,223 | 5,778 | 5,689 | 8,021 | 5,794 |
| Columbia, | 2,412 | 2,393 | 1,872 | 2,066 | 2,146 | 2,113 | 2,061 | 1,498 |
| Dauphin, | 2,294 | 2,215 | 2,229 | 2,280 | 2,347 | 2,450 | 2,469 | 2,486 |
| Lackawanna, | 42,418 | 44,214 | 43,214 | 43,991 | 43,927 | 43,925 | 44,124 | 47,000 |
| Lozierne, | 63,069 | 60,500 | 59,395 | 62,880 | 63,128 | 63,898 | 68,292 | 67,081 |
| Northumberland, | 15,581 | 14,878 | 15,133 | 15,148 | 15,392 | 15,075 | 15,320 | 14,898 |
| Schuylkill, | 40,775 | 39,457 | 38,653 | 39,285 | 39,822 | 39,670 | 38,004 | 38,521 |
| Sullivan, | 875 | 963 | 920 | 992 | 963 | 1,024 | 1,063 | 1,053 |
| Susquehanna, | 1,302 | 1,267 | 1,267 | 1,313 | 1,391 | 1,420 | 1,539 | 1,395 |
| Wayne, | 225 | 194 | 190 | 160 | 151 | 40 | 1,97 | 1,116 |
| Totals, | 174,503 | 171,195 | 168,177 | 173,328 | 175,098 | 175,310 | 180,899 | 177,339 |

TABLE K.—Production of coal in tons of 2,000 pounds by counties, 1899-1915, inclusive

| Counties | 1899 | 1900 | 1901 | 1902 | 1903 | 1904 | 1905 | 1906 | 1907 |
|-----------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Carbon, | 1,896,267 | 1,863,637 | 1,858,519 | 1,104,462 | 2,150,021 | 2,253,512 | 2,476,406 | 2,246,823 | 2,762,523 |
| Columbia, | 1,062,469 | 980,721 | 1,209,859 | 738,070 | 1,353,904 | 1,151,624 | 1,229,697 | 969,065 | 1,188,268 |
| Dauphin, | 817,328 | 779,135 | 830,572 | 423,341 | 732,970 | 723,414 | 723,126 | 734,723 | 829,980 |
| Lackawanna, | 11,838,821 | 12,755,961 | 17,268,135 | 11,851,169 | 20,046,733 | 19,007,628 | 19,709,164 | 18,430,561 | 22,433,409 |
| Lehigh, | 293,778,712 | 21,481,122 | 23,963,869 | 14,577,949 | 27,878,362 | 27,705,288 | 29,992,636 | 26,612,192 | 30,853,087 |
| Luzerne, | 1,860,292 | 4,690,944 | 5,430,991 | 3,162,066 | 5,618,580 | 5,516,647 | 5,483,181 | 5,367,497 | 6,666,352 |
| Northumberland, | 11,694,171 | 12,998,899 | 15,277,658 | 8,622,103 | 16,389,595 | 16,177,138 | 17,975,160 | 16,376,593 | 20,109,701 |
| Schuykill, | 183,182 | 235,112 | 152,595 | 409,017 | 294,442 | 294,365 | 310,416 | 300,497 | 344,001 |
| Sullivan, | 699,020 | 556,003 | 743,105 | 452,758 | 800,773 | 624,166 | 580,436 | 562,103 | 644,098 |
| Susquehanna, | 399,069 | 21,862 | 363,462 | ..... | 68,886 | 71,353 | 67,008 | 71,381 | 85,594 |
| Wayne, | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, | 30,518,331 | 57,363,396 | 67,094,665 | 41,340,935 | 75,232,585 | 73,504,369 | 78,647,020 | 72,133,510 | 86,056,412 |

| Counties | 1908 | 1909 | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 |
|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Carbon, | 2,784,946 | 2,652,997 | 3,214,169 | 3,312,483 | 2,843,876 | 3,353,277 | 2,136,691 | 3,337,156 |
| Columbia, | 1,182,826 | 1,693,103 | 960,145 | 1,193,736 | 1,214,527 | 1,214,648 | 1,065,471 | 1,202,465 |
| Dauphin, | 848,065 | 932,393 | 886,192 | 946,963 | 945,102 | 1,060,270 | 1,000,988 | 1,972,110 |
| Lackawanna, | 21,631,995 | 20,480,212 | 21,182,921 | 22,598,414 | 20,617,308 | 21,836,671 | 21,649,788 | 21,697,593 |
| Lehigh, | 31,798,997 | 30,492,366 | 32,106,979 | 35,064,582 | 32,643,232 | 36,326,287 | 36,373,767 | 35,266,086 |
| Northumberland, | 6,067,741 | 5,987,835 | 6,324,317 | 7,109,372 | 6,831,491 | 7,012,687 | 6,710,131 | 6,354,459 |
| Schuykill, | 18,196,714 | 16,794,597 | 17,696,013 | 19,234,447 | 17,986,745 | 19,511,483 | 18,634,834 | 19,644,353 |
| Sullivan, | 550,712 | 641,216 | 622,874 | 717,429 | 643,253 | 694,736 | 653,730 | 604,353 |
| Susquehanna, | 487,900 | 539,835 | 628,408 | 672,400 | 584,361 | 594,764 | 658,249 | 760,076 |
| Wayne, | 63,906 | 50,339 | 51,576 | 70,150 | 82,943 | 59,784 | 133,402 | 105,274 |
| Totals, | 82,543,243 | 80,223,833 | 83,683,994 | 90,917,176 | 84,436,869 | 91,636,964 | 91,189,641 | 89,377,706 |

TABLE I.—Fatal accidents per 1,000 employes inside and outside the mines, and production in tons per fatal accident, by years and by decades, 1870-1915, inclusive

| Years | Employes | Fatal accidents | Fatal accidents per 1,000 employes | Production in tons of 2,000 pounds | Production per fatal accident | Fatal accidents per 1,000,000 tons produced |
|-------------------------------|-----------|-----------------|------------------------------------|------------------------------------|-------------------------------|---|
| 1870, | 35,600 | 211 | 5.93 | 14,172,004 | 67,166 | 14.89 |
| 1871, | 37,488 | 210 | 5.60 | 15,532,252 | 73,963 | 13.52 |
| 1872, | 44,745 | 223 | 4.98 | 15,567,973 | 69,811 | 14.32 |
| 1873, | 48,199 | 264 | 5.48 | 21,001,521 | 79,551 | 12.57 |
| 1874, | 53,402 | 231 | 4.33 | 19,930,240 | 86,278 | 11.59 |
| 1875, | 69,966 | 238 | 3.40 | 23,402,646 | 98,330 | 10.17 |
| 1876, | 70,474 | 228 | 3.24 | 23,440,666 | 102,810 | 9.73 |
| 1877, | 66,842 | 194 | 2.90 | 24,727,213 | 127,460 | 7.85 |
| 1878, | 63,964 | 187 | 2.92 | 20,900,966 | 111,770 | 8.95 |
| 1879, | 68,847 | 262 | 3.81 | 31,036,600 | 118,460 | 8.44 |
| Totals and percentages, | 559,527 | 2,248 | 4.02 | 209,712,081 | 93,288 | 10.72 |
| 1880, | 73,373 | 202 | 2.75 | 27,974,532 | 138,488 | 7.22 |
| 1881, | 76,031 | 274 | 3.59 | 34,202,558 | 125,284 | 7.98 |
| 1882, | 82,300 | 291 | 3.54 | 35,057,430 | 120,472 | 8.30 |
| 1883, | 91,421 | 323 | 3.53 | 37,747,369 | 116,865 | 8.56 |
| 1884, | 101,073 | 332 | 3.28 | 36,468,738 | 109,846 | 9.10 |
| 1885, | 100,320 | 332 | 3.31 | 28,232,155 | 115,157 | 8.68 |
| 1886, | 103,044 | 279 | 2.71 | 38,950,932 | 139,609 | 7.16 |
| 1887, | 106,517 | 316 | 2.97 | 42,156,300 | 133,406 | 7.50 |
| 1888, | 122,218 | 364 | 2.98 | 46,635,077 | 128,118 | 7.81 |
| 1889, | 119,646 | 397 | 3.32 | 43,650,768 | 109,952 | 9.09 |
| Totals and percentages, | 975,843 | 3,169 | 3.10 | 381,075,819 | 122,572 | 8.16 |
| 1890, | 119,919 | 378 | 3.15 | 44,986,286 | 119,011 | 8.40 |
| 1891, | 123,308 | 428 | 3.47 | 49,701,222 | 116,125 | 8.61 |
| 1892, | 130,300 | 418 | 3.21 | 51,226,978 | 122,553 | 8.16 |
| 1893, | 138,069 | 456 | 3.30 | 52,841,110 | 115,880 | 8.63 |
| 1894, | 139,939 | 446 | 3.19 | 50,906,920 | 114,276 | 8.75 |
| 1895, | 143,705 | 421 | 2.93 | 56,948,756 | 135,270 | 7.39 |
| 1896, | 150,088 | 502 | 3.34 | 53,583,250 | 107,257 | 9.32 |
| 1897, | 149,557 | 423 | 2.83 | 52,583,076 | 124,305 | 8.04 |
| 1898, | 142,420 | 411 | 2.89 | 52,812,675 | 128,498 | 7.73 |
| 1899, | 140,604 | 461 | 3.28 | 60,518,331 | 131,276 | 7.62 |
| Totals and percentages, | 1,377,909 | 4,344 | 3.15 | 526,426,664 | 121,185 | 8.25 |
| 1900, | 143,824 | 411 | 2.86 | 57,363,296 | 139,570 | 7.16 |
| 1901, | 147,651 | 513 | 3.47 | 67,094,665 | 130,789 | 7.65 |
| 1902, | 148,139 | 300 | 2.03 | 41,340,935 | 137,803 | 7.26 |
| 1903, | 151,827 | 518 | 3.41 | 75,232,585 | 145,217 | 6.89 |
| 1904, | 161,330 | 595 | 3.69 | 73,594,369 | 122,688 | 8.08 |
| 1905, | 168,254 | 644 | 3.83 | 78,647,020 | 122,123 | 8.19 |
| 1906, | 166,175 | 567 | 3.35 | 72,139,510 | 129,514 | 7.72 |
| 1907, | 168,774 | 708 | 4.20 | 86,056,412 | 121,549 | 8.23 |
| 1908, | 174,503 | 678 | 3.88 | 83,543,243 | 123,220 | 8.12 |
| 1909, | 171,195 | 567 | 3.31 | 80,223,833 | 141,488 | 7.07 |
| Totals and percentages, | 1,601,672 | 5,491 | 3.42 | 715,235,946 | 130,256 | 7.68 |

TABLE L.—Continued

| Years | Employees | Fatal accidents | Fatal accidents per 1,000 employees | Production in tons of 2,000 pounds | Production per fatal accident | Fatal accidents per 1,000,000 tons produced |
|-------------------------------------|-----------|-----------------|-------------------------------------|------------------------------------|-------------------------------|---|
| 1910, | 168,175 | 601 | 3.57 | 83,683,994 | 139,241 | 7.18 |
| 1911, | 173,338 | 699 | 4.03 | 90,917,176 | 130,067 | 7.69 |
| 1912, | 175,098 | 601 | 3.43 | 84,426,869 | 140,477 | 7.12 |
| 1913, | 175,310 | 624 | 3.56 | 91,626,964 | 146,838 | 6.81 |
| 1914, | 180,899 | 600 | 3.32 | 91,189,641 | 151,982 | 6.58 |
| 1915, | 177,339 | 588 | 3.32 | 89,377,706 | 152,003 | 6.58 |
| Totals and percentages, | 1,050,159 | 3,713 | 3.54 | 531,222,350 | 143,071 | 6.99 |
| Grand totals and percentages, | 5,565,110 | 18,905 | 3.40 | 2,363,672,860 | 125,029 | 8.00 |

Note:—The Anthracite Mine Law became effective in 1870, and the average number of fatalities for the first decade, 1870-1879 inclusive, was 4.02 per 1,000 employees and 10.72 for every 1,000,000 tons produced.

The average number of fatalities for the second decade, 1880-1889 inclusive, was 3.10 per 1,000 employees and 8.16 for every 1,000,000 tons produced.

The average number of fatalities for the third decade, 1890-1899 inclusive, was 3.15 per 1,000 employees and 8.25 for every 1,000,000 tons produced.

The average number of fatalities for the fourth decade, 1900-1909 inclusive, was 3.42 per 1,000 employees and 7.68 for every 1,000,000 tons produced.

The average number of fatalities for the six years 1910-1915 inclusive, was 3.54 per 1,000 employees and 6.99 for every 1,000,000 tons produced.

The record for 1915 of 3.32 (the same as in 1914) lives lost for every 1,000 employees and 6.58 for every 1,000,000 tons produced is a good record under the circumstances and is gratifying to the Department.



ANTHRACITE DISTRICTS



FIRST DISTRICT

LACKAWANNA COUNTY

Carbondale, Pa., February 29, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the First Anthracite District for the year ending December 31, 1915.

Respectfully submitted,

P. J. MOORE,
Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 14 |
| Number of mines, | 28 |
| Number of mines in operation, | 28 |
| Number of tons of coal shipped to market, | 3,805,628 |
| Number of tons used at mines for steam and heat, | 370,036 |
| Number of tons sold to local trade and used by employes, | 47,204 |
| Number of tons produced, | 4,222,868 |
| Number of tons produced by compressed air machines, ..... | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 6,997 |
| Number of persons employed outside, | 2,121 |
| Number of fatal accidents inside of mines, | 32 |
| Number of fatal accidents outside, | 6 |
| Number of non-fatal accidents inside of mines, | 69 |
| Number of non-fatal accidents outside, | 11 |
| Number of tons of coal produced per fatal accident inside, | 131,965 |
| Number of tons produced per fatal accident outside, | 703,811 |
| Number of tons produced per fatal accident inside and outside, | 111,128 |
| Number of persons employed per fatal accident inside, | 219 |
| Number of persons employed per fatal accident outside, | 353 |
| Number of persons employed per fatal accident inside and outside, | 240 |
| Number of persons employed per non-fatal accident inside, | 101 |
| Number of persons employed per non-fatal accident outside, | 193 |
| Number of persons employed per non-fatal accident inside and outside, | 114 |
| Number of wives made widows, | 18 |
| Number of children made orphans, | 56 |
| Number of steam locomotives used inside of mines, ..... | ..... |
| Number of steam locomotives used outside, | 30 |
| Number of compressed air locomotives used inside, | 19 |
| Number of compressed air locomotives used outside, ..... | ..... |
| Number of electric motors used inside, | 69 |
| Number of electric motors used outside, ..... | ..... |
| Number of gasoline locomotives used inside, ..... | ..... |
| Number of fans in use, | 30 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 6 |
| Number of non-gaseous mines in operation, | 22 |
| Number of new mines opened, ..... | ..... |
| Number of old mines abandoned, ..... | ..... |

TABLE A
PRODUCTION OF COAL

| Names of Operators | Tons |
|---------------------------------------|------------------|
| Delaware and Hudson Company, | 3,077,301 |
| Temple Coal Company, | 465,298 |
| Scranton Coal Company, | 346,070 |
| Hillside Coal and Iron Company, | 146,240 |
| Archbald Coal Company, | 145,204 |
| West Mountain Coal Company, | 12,376 |
| Humbert Coal Company, | 11,953 |
| Sacandaga Coal Company, | 9,667 |
| Fall Brook Coal Company, | 8,759 |
| Total, | <u>4,222,868</u> |

| Production by Counties | |
|------------------------|------------------|
| Lackawanna, | <u>4,222,868</u> |

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|-----------------------------------|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| Delaware and Hudson Co., | 18 | 6 | 24 | 60 | 10 | 70 | 170,961 | 51,288 | 4,956 | 1,411 | 6,367 | 275 | 295 | 83 | 141 |
| Empire Coal Co., | 2 | 2 | 4 | 2 | 2 | 4 | 227,649 | 227,649 | 719 | 180 | 899 | 360 | ..... | 360 | ..... |
| Saratoga Coal Co., | 4 | 4 | 8 | 4 | ..... | 4 | 86,518 | 86,518 | 688 | 266 | 954 | 172 | ..... | 172 | ..... |
| Hillside Coal and Iron Co., ..... | ..... | ..... | ..... | ..... | ..... | ..... | 48,747 | 48,747 | 139 | 86 | 285 | 66 | ..... | ..... | ..... |
| Archbald Coal Co., ..... | ..... | ..... | ..... | 2 | ..... | 2 | 29,041 | 12,002 | 284 | 92 | 376 | 57 | ..... | 142 | ..... |
| West Mountain Coal Co., ..... | ..... | ..... | ..... | 1 | ..... | 1 | 12,376 | 12,376 | 38 | 15 | 53 | ..... | ..... | 38 | ..... |
| Humbert Coal Co., ..... | ..... | ..... | ..... | ..... | 1 | 1 | 11,953 | 11,953 | 64 | 46 | 110 | ..... | ..... | 46 | ..... |
| Miscellaneous Companies, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 49 | 25 | 74 | ..... | ..... | ..... | ..... |
| Totals and averages, | 32 | 6 | 38 | 69 | 11 | 80 | 131,965 | 61,201 | 6,997 | 2,121 | 9,118 | 219 | 333 | 101 | 182 |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Percentages | |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|-------------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | Totals |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, ..... | ..... | ..... | .. | ..... | 1 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 2 | 6.25 |
| Falls of roof, | 1 | 1 | 1 | 4 | 1 | 5 | 1 | ..... | 1 | ..... | 3 | 1 | 19 | 59.37 |
| Mine cars, | 1 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2 | ..... | ..... | 5 | 15.62 |
| Blasts, premature and otherwise, ..... | ..... | 3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4 | 12.50 |
| Mules, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | 3.13 |
| Scalded in sump, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | 3.13 |
| Totals, | 5 | 2 | 1 | 4 | 2 | 5 | 1 | 1 | 2 | 3 | 4 | 2 | 32 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | 2 | 33.33 |
| Machinery, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | 3 | 50.00 |
| By falling, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 16.67 |
| Totals, | 1 | ..... | ..... | ..... | 1 | ..... | ..... | 1 | 2 | ..... | ..... | 1 | 6 | 100.00 |
| Grand totals, | 6 | 2 | 1 | 4 | 3 | 5 | 1 | 2 | 4 | 3 | 4 | 3 | 38 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | 1 | ..... | ..... | ..... | 1 | ..... | 2 | ..... | ..... | ..... | ..... | ..... | 4 | 5.80 |
| Falls of roof, | 4 | ..... | 4 | ..... | 1 | 1 | 1 | 1 | ..... | ..... | 1 | 2 | 19 | 27.53 |
| Mine cars, | 1 | ..... | ..... | ..... | 1 | 6 | 3 | 2 | 4 | ..... | 2 | 1 | 28 | 40.58 |
| Explosions of powder and dynamite, ..... | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 2.90 |
| Blasts, premature and otherwise, | 1 | 1 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 | 4 | 5.80 |
| Struck by piece of coal, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1.45 |
| Struck by bar, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1.45 |
| Struck by rope, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2 | 2.90 |
| Mules, ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | 2 | ..... | ..... | ..... | 4 | 5.79 |
| Falling, ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | ..... | ..... | 2 | 2.90 |
| Struck by rail, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | 1.45 |
| Struck by screen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | 1.45 |
| Totals, | 8 | 7 | 4 | 5 | 7 | 10 | 6 | 5 | 6 | 2 | 4 | 2 | 69 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, ..... | ..... | 2 | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 1 | ..... | ..... | 5 | 45.45 |
| Struck by frozen culm, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 9.09 |
| Struck by wagon, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 9.09 |
| Falling, ..... | ..... | ..... | 1 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 18.18 |
| Struck by rope, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | 9.09 |
| Mules, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 9.10 |
| Totals, | 1 | 2 | 2 | ..... | 1 | 1 | 1 | ..... | ..... | 2 | ..... | 1 | 11 | 100.00 |
| Grand totals, | 9 | 9 | 6 | 5 | 8 | 11 | 7 | 5 | 6 | 4 | 4 | 6 | 80 | ..... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|------------------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| Inside | | | | | | | | | | | | |
| Miners, | 2 | ... | ... | 3 | 1 | 1 | 1 | 1 | 1 | ... | 1 | 1 |
| Miners' laborers, | 2 | 1 | 1 | 1 | 1 | 4 | ... | ... | ... | ... | 2 | 1 |
| Drivers and runners, | 1 | 1 | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... |
| Doorboys and helpers, | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... |
| Brakemen, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Totals, | 5 | 2 | 1 | 4 | 2 | 5 | 1 | 1 | 2 | 3 | 4 | 2 |
| Outside | | | | | | | | | | | | |
| Engineers and firemen, | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| Statepickers (boys), | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 2 |
| Brakemen, | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | ... | 1 |
| Laborers, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 |
| Totals, | 1 | ... | ... | ... | 1 | ... | ... | 1 | 2 | ... | ... | 6 |
| Grand totals, | 6 | 2 | 1 | 4 | 3 | 5 | 1 | 2 | 4 | 3 | 4 | 38 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-----------------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| Inside | | | | | | | | | | | | |
| Miners, | 6 | 2 | 3 | 2 | 4 | 1 | ... | 1 | ... | 1 | 1 | 3 |
| Miners' laborers, | 1 | 3 | 1 | 1 | 1 | 4 | 4 | ... | ... | 1 | 1 | 22 |
| Drivers and runners, | 1 | 1 | ... | 1 | 1 | 4 | ... | ... | ... | ... | ... | 15 |
| Doorboys and helpers, | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 2 |
| Tracklayers, | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 |
| Company men, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 |
| Brakemen, | ... | 1 | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 3 |
| Engineers, | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| Totals, | 8 | 7 | 4 | 5 | 7 | 10 | 6 | 5 | 6 | 2 | 4 | 63 |
| Outside | | | | | | | | | | | | |
| Foremen, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 |
| Miners, | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Brakemen, | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 |
| Statepickers (boys), | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Headmen, | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 |
| Drivers, | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 4 |
| Laborers, | 1 | 1 | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... |
| Totals, | 1 | 2 | 2 | ... | 1 | 1 | 1 | ... | ... | 2 | ... | 11 |
| Grand totals, | 9 | 9 | 6 | 5 | 8 | 11 | 7 | 5 | 6 | 4 | 4 | 80 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|------------------|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American, | 2 | ..... | ..... | 1 | ..... | ..... | ..... | 1 | 2 | 2 | 1 | ..... | 9 |
| English, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 |
| Welsh, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | 2 |
| Polish, ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| Italian, | 4 | 1 | ..... | 1 | ..... | 1 | ..... | 1 | ..... | 1 | ..... | 1 | 10 |
| Slavonian, ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| Austrian, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | 3 |
| Russian, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, | 6 | 2 | 1 | 4 | 3 | 2 | 1 | 2 | 4 | 3 | 4 | 2 | 33 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-------------------|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American, | 4 | 2 | 3 | 3 | 3 | 6 | 4 | 2 | 4 | 2 | 1 | 2 | 38 |
| English, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | 2 |
| Welsh, ..... | ..... | 1 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| German, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Polish, | 3 | ..... | ..... | ..... | ..... | 1 | 2 | 3 | 1 | ..... | ..... | ..... | 9 |
| Italian, | 1 | 4 | 1 | ..... | 3 | 1 | ..... | ..... | ..... | 1 | 2 | 1 | 14 |
| Slavonian, ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| Lithuanian, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | ..... | 2 |
| Austrian, | 1 | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... | ..... | ..... | 3 |
| Russian, | 1 | 1 | 2 | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 6 |
| Greek, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, | 9 | 9 | 6 | 5 | 8 | 11 | 7 | 5 | 6 | 4 | 4 | 6 | 80 |

| | | | | | | | | | | | | | |
|-----------------------------|--------------|--------------|-------------|--------------------------|-------------|-------------|-----------------|-------------------|--|---|-------------------------------|-------------------------------|------------|
| Jermyn Colliery: | | | | | | | | | | | | | |
| Jermyn, | Shaft, | Non-gas., .. | Fan, | { 20 17 17 } | 5 5 5 | 6 6 6 | 75 75 120 | 1.5 1.9 1.2 | Guibal, Guibal, Guibal, | Steam, Steam, Electricity, .. | 240,500 150,300 220,000 | 240,500 150,300 220,000 | 704 |
| Temple Coal Co. | | | | | | | | | | | | | |
| Sterrick Creek Colliery: | Drift, | Gaseous, .. | Fan, | 20 | 4.5 | 4.5 | 70 | 1.3 | { Guibal, Guibal, Guibal, } | Steam, | 50,000 | 45,500 | 250 |
| Sterrick Creek, | Shaft, | Gaseous, .. | Fan, | { 25 10 } | 5 3.5 | 5.5 3.5 | 65 175 | .5 .8 | | Steam, | 75,000 58,000 | 80,400 58,000 | 350 119 |
| Sterrick Creek, | | | | | | | | | | Steam, | 55,000 | 35,000 | |
| Scranton Coal Co. | | | | | | | | | | | | | |
| Raymond Colliery: | Slope, | Non-gas., .. | Fan, | 14 | 6 | 5 | 100 | 1.2 | Guibal, | Steam, | 75,000 | 60,500 | 280 |
| Raymond No. 3, | Slope, | Non-gas., .. | Fan, | 18 | 5 | 5 | 75 | 1 | Guibal, | Steam, | 70,400 | 58,000 | 271 |
| Riverside Colliery: | | | | | | | | | | | | | |
| Riverside, | Shaft, | Gaseous, .. | Fan, | 20 | 4 | 6 | 78 | .5 | Guibal, | Steam, | 55,000 | 40,000 | 181 |
| Hillsdale Coal and Iron Co. | | | | | | | | | | | | | |
| Erie Colliery: | Shaft, | Non-gas., .. | Fan, | 18 | 5 | 5 | 70 | .5 | Guibal, | Steam, | 45,400 | 30,000 | 139 |
| Archbald Coal Co. | | | | | | | | | | | | | |
| Tapscott Colliery: | Slope, | Non-gas., .. | Fan, | { 16 12 } | 5 3 | 6 3 | 75 80 | .5 .3 | { Guibal, Guibal, } | Steam, | 120,000 | 98,300 | 284 |
| West Mountain Coal Co. | | | | | | | | | | | | | |
| West Mountain Colliery: | Drift, | Non-gas., .. | Fan, | 12 | 3 | 3 | 75 | .7 | Guibal, | Steam, | 30,000 | 25,000 | 38 |
| Humbert Coal Co. | | | | | | | | | | | | | |
| Sunnyside Colliery: | Tunnel, .. | Non-gas., .. | Fan, | 6 | 3 | 4 | 90 | .6 | Guibal, | Steam, | 30,000 | 10,000 | 61 |
| Sacandaga Coal Co. | | | | | | | | | | | | | |
| Sacandaga No. 3 Colliery: | Drift, | Non-gas., .. | Natural, .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 8,000 | 6,000 | 20 |
| Fall Brook Coal Co. | | | | | | | | | | | | | |
| Murrin's Colliery: | Drift, | Non-gas., .. | Natural, .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 5,000 | 4,000 | 29 |

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|---|--|---|---|---|--|--|
| •Delaware and Hudson Co. Olyphant, Coal Brook, Gravely Slope, Powderly, Jermyn, Jermyn Washery, | Lackawanna, [Lackawanna,] [Lackawanna,] | [E. R. Pettebone,] [Delaware and Hud- son Co.,] [Charles Dorrance, Jr.,] [The Hudson Coal Co.,] | Dorrancton, Scranton, | [Fred Warner,] [C. H. Constantine,] [R. C. Welliver,] [C. H. Constantine,] [C. H. Constantine,] | Scranton, Carbondale, Archbald, Carbondale, Carbondale, Carbondale, | Delaware and Hudson |
| Temple Coal Co. Sterrick Creek, | Lackawanna, ... | Frank Hemelright, ... | Scranton, | Joseph Reese, | Olyphant, | Erie |
| Scranton Coal Co. Raymond, Riverside, | [Lackawanna,] [Lackawanna,] | William L. Allen, ... | Scranton, | Daniel Young, Sr., ... | Scranton, | N. Y. O. and W. |
| Hillside Coal and Iron Co. Erie, | Lackawanna, ... | W. W. Ingalls, | Scranton, | J. P. Jennings, | Moosile, | Erie |
| Tappan, Archbald Coal Co. West Mountain Coal Co. West Mountain, ... | Lackawanna, Lackawanna, Lackawanna, Lackawanna, ... | James H. Hughes, ... John A. Komara, W. C. Humbert, | Wilkes-Barre, Jermyn, Jessup, | Richard Howells, ... Thomas Kennedy, M. J. Loftus, | Scranton, Jermyn, Jessup, | Delaware and Hudson N. Y. O. and W. Erie |
| Sacandaga Coal Co. Sacandaga No. 3, Fall Brook Coal Co. Murrin's, | Lackawanna, ... Lackawanna, Lackawanna, ... | E. H. Leaning, Frank Murrin, | Scranton, Carbondale, | John A. Hines, | Scranton, | Delaware and Hudson N. Y. O. and W. |

*Inside workings under Delaware and Hudson Co. Outside workings under the Hudson Coal Co.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employes | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|-----------------------------------|-------------|--|--|---|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Delaware and Hudson Co. | | | | | | | | | | | | | |
| Olyphant, | Lackawanna, | 841,027 | 89,550 | 15,876 | 946,463 | 275 | 1,988 | 19 | 14 | 1,104,800 | 5,393 | 41,398 | 118 |
| Camp Hill, | | 646,497 | 42,169 | ..... | 688,666 | 267 | 1,561 | 6 | 23 | 576,000 | 82,797 | 2,298 | 74 |
| Gravitt Slope, | | 411,885 | 50,977 | 5,541 | 468,409 | 271 | 1,041 | 4 | 14 | 385,025 | 148,289 | 21,607 | 69 |
| Powderly, | | 432,174 | 26,784 | ..... | 457,970 | 279 | 889 | 4 | 13 | 238,100 | 35,334 | 9,438 | 75 |
| Jermyn, | | 388,196 | 26,461 | 6,073 | 430,733 | 290 | 854 | ..... | 6 | 340,100 | 54,698 | ..... | 57 |
| Totals, | | 2,719,789 | 234,956 | 27,496 | 2,982,241 | ..... | 6,333 | 24 | 70 | 2,724,025 | 326,421 | 74,643 | 393 |
| Washeries: | | | | | | | | | | | | | |
| Jermyn, | Lackawanna, | 71,587 | 23,473 | ..... | 95,060 | 132 | 34 | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, | | 2,719,789 | 234,956 | 27,496 | 2,982,241 | ..... | 6,367 | 24 | 70 | 2,724,025 | 326,421 | 74,643 | 393 |
| Temple Coal Co. | | | | | | | | | | | | | |
| Sterrick Creek, | Lackawanna, | 434,036 | 26,335 | 4,924 | 465,298 | 236 | 899 | 2 | 2 | 282,654 | 55,550 | ..... | 107 |
| Seranton Coal Co. | | | | | | | | | | | | | |
| Raymond, | Lackawanna, | 249,170 | 23,614 | 1,748 | 268,532 | 216 | 748 | 4 | 1 | 167,000 | 194,275 | ..... | 69 |
| Riverside, | Lackawanna, | 46,745 | 30,295 | 498 | 77,538 | 153 | 266 | ..... | 3 | 45,000 | 15,700 | ..... | 28 |
| Totals, | | 289,915 | 53,909 | 2,246 | 346,070 | ..... | 954 | 4 | 4 | 212,000 | 209,971 | ..... | 97 |
| Hillside Coal and Iron Co. | | | | | | | | | | | | | |
| Erie, | Lackawanna, | 128,698 | 16,784 | 758 | 146,240 | 203 | 285 | 3 | ..... | 132,750 | 250 | 7,750 | 18 |
| Archbald Coal Co. | | | | | | | | | | | | | |
| Tappan, | Lackawanna, | 134,900 | 9,376 | 928 | 145,204 | 262 | 376 | 5 | 2 | 87,500 | 120,300 | ..... | 26 |

*Delaware and Hudson Co. inside. The Hudson Coal Co. outside.

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | Locomotives | | | | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors |
|--------------------------------|-------------|-------------------|-------------|---------|-------------|-------------------|----------|-------|-----|-------------------|---|--------------------------------|--|----------------------------|---------------------------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Air | Electric | | | | | |
| Delaware and Hudson Co., ... | Lackawanna, | 18 | 486 | 51 | 12,284 | 12,871 | ... | 18 | 19 | 58 | 16,144 | 59,250 | 14,400 | 13 | 6 |
| Temple Coal Co., | | ... | ... | 8 | 1,800 | 1,800 | ... | 2 | 4 | 27 | 2,770 | 2,700 | 2,500 | 4 | 2 |
| Scranton Coal Co., | | ... | ... | 17 | 2,215 | 2,215 | ... | 3 | ... | 36 | 2,352 | 6,352 | 4,988 | ... | ... |
| Hillside Coal and Iron Co., .. | | ... | ... | 8 | 1,200 | 1,200 | ... | ... | ... | 25 | 1,265 | 1,732 | 1,500 | ... | ... |
| Arcadia Coal Co., | | ... | ... | 3 | 700 | 700 | ... | ... | ... | 13 | 736 | 1,250 | 800 | ... | ... |
| West Branch Coal Co., | | ... | ... | 3 | 800 | 800 | ... | ... | ... | 6 | 145 | ... | ... | ... | ... |
| Highland Coal Co., | | ... | ... | 3 | 800 | 800 | ... | ... | ... | 6 | 187 | ... | ... | ... | ... |
| Sacandaga Coal Co., | | ... | ... | 1 | 250 | 250 | ... | ... | ... | 1 | 53 | ... | ... | ... | ... |
| Fall Brook Coal Co., | | ... | ... | 1 | 150 | 150 | ... | 1 | ... | ... | 50 | ... | ... | ... | ... |
| Totals, | | 118 | 486 | 96 | 19,076 | 19,555 | ... | 30 | 119 | 272 | 23,792 | 71,284 | 23,948 | 23 | 15 |

TABLE 3.—Number of each class of employes inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | | Outside | | | | | | | | Grand total | | | |
|------------------------------|-------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|--------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|--------------------|---------------|-------|-------|--|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employes | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men, | Bookkeepers and clerks | All other employes | Total outside | | | |
| Delaware and Hudson Co., | Lackawanna, | 7 | 17 | 8 | 1,393 | 2,082 | 530 | 187 | 20 | 488 | 426 | 4,956 | ... | 11 | 56 | 163 | 95 | 337 | 13 | 736 | 1,411 | 6,367 | | |
| Tenneco Coal Co., | | 2 | 3 | 6 | 186 | 238 | 96 | 9 | 4 | 60 | 55 | 719 | 1 | 1 | 11 | 15 | 15 | 44 | 4 | 104 | 180 | 899 | | |
| Shawmut Coal Co., | | 2 | 4 | ... | 279 | 242 | 84 | 12 | 8 | 57 | 57 | 688 | ... | 2 | 15 | 39 | 93 | 12 | 2 | 103 | 266 | 964 | | |
| Hillsdale Coal and Iron Co., | | 1 | ... | ... | 78 | 72 | 9 | 2 | 1 | 34 | ... | 199 | ... | 1 | 7 | 7 | 18 | 5 | 1 | 47 | 86 | 285 | | |
| Archbold Coal Co., | | 2 | 2 | ... | 97 | 123 | 34 | 7 | 2 | 16 | 2 | 234 | ... | 1 | 1 | 11 | 10 | 6 | 1 | 55 | 92 | 376 | | |
| West Mountain Coal Co., | | 1 | ... | ... | 20 | 11 | 6 | ... | ... | 3 | ... | 28 | ... | 1 | 1 | 4 | 6 | ... | ... | 1 | 6 | 15 | 53 | |
| Humbert Coal Co., | | 1 | 1 | ... | 23 | 30 | 6 | ... | ... | ... | ... | 64 | ... | 1 | 4 | 6 | 17 | 7 | 1 | 10 | 46 | 110 | 34 | |
| Sacandaga Coal Co., | | 1 | ... | ... | 5 | 11 | 2 | ... | ... | 1 | ... | 20 | ... | 1 | ... | 1 | 4 | ... | 3 | 1 | 6 | 14 | 40 | |
| Fall Brook Coal Co., | | 1 | ... | ... | 8 | 16 | 2 | ... | ... | ... | 2 | 29 | ... | ... | 1 | 2 | 1 | 1 | 1 | 2 | 11 | 40 | | |
| Totals, | | | 17 | 29 | 14 | 2,089 | 2,888 | 769 | 17 | 35 | 600 | 342 | 6,997 | 5 | 19 | 104 | 244 | 243 | 414 | 25 | 1,968 | 2,120 | 9,118 | |

*Delaware and Hudson Co., inside. The Hudson Coal Co., outside.

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|------|--|--------------------------------|--------------------------------|----------|-------------------|------------------|-------------------|--------------------|------------|---|
| Jan. | John Ritko, | American, .. | Runner, | 18 | S. | .... | .... | Olyphant, | | Fatally injured by being crushed by trip of loaded mine cars along main road. The trip was stopped and he and another runner had a mule to pull the trip a short distance. The other runner led the mule and Ritko unhooked the mule from the trip and a few minutes later the driver boss found Ritko lying alongside the track. Died when he reached the hospital. |
| 14 | (Louis Manandy, { James Chichili, | Italian, Italian, | Miner, Laborer, | 24 22 | S. S. | .... .... | .... .... | { Erie, } | | Fatally injured by flying coals from a blast in face of chamber. Manandy was tampering the charge when in some unknown manner it was ignited. The cartridge was too large to pass in the inside end of hole, owing to the "bit" being too small. They were trying to drive the powder back with drill when it exploded. Fatally injured. He fell against sprocket wheel of small conveyor line under the breaker and was dragged along with the conveyors. He was walking alongside of conveyor and slipped on a step and fell against the wheel. Outside. |
| 21 | Pasco Tomalno, | American, .. | Slatepicker, ... | 14 | S. | .... | .... | Gravity Slope, .. | Lackawanna | Fatally injured by flying coals from a blast fired on heading road. He was not an employee of the company or of the miner, but had been taken in by the laborer to be instructed how to load coal. The heading miner was taken back along the heading to take a light skip off and was about to fire a blast when Kenda and the laborer he was helping came out the heading road. They were told to go up a chamber opposite where the blast was being fired, but they did not go far enough. The hanging coals struck a door and broke through it, striking Kenda. |
| 23 | Joseph Renda, | Italian, | Laborer, | 25 | S. | .... | .... | Gravity Slope, .. | | |

| | | | | | | | | | |
|----------|---|------------------------------|----------------|----------|----------|--------|--------|------------------------------------|--|
| Jan. 28 | Fabian Quatrone, | Italian, | Miner, | 35 | S. | .... | .... | Tappans, | Fatally injured by fall of roof at face of chamber while shoveling coal. Died at hospital February 13. |
| Feb. 19 | Otilio Nottebie, | Italian, | Runner, | 19 | S. | .... | .... | Raymond, | Fatally injured by being squeezed between two loaded cars on a curve along heading. He was trying to couple the cars while they were clumped against others. He was on the short side of the curve. |
| 27 | Bennie Mofoskie, | Polish, | Laborer, | 30 | S. | .... | .... | Raymond, | Fatally injured by fall of roof at face of chamber while getting some tools near the pillar. The miner had the place well propped, but neglected this piece. |
| March 6 | Antonio Krokavage, .. | Polish, | Laborer, | 27 | S. | .... | .... | Powderly, | Instantly killed by fall of roof at face. His miner had fired a shot which discharged a number of props. The laborer disobeyed the instructions given him by the miner and went to the face, when a fall of roof caught him. |
| April 10 | { Andrew Wosusky, .. { John Gaffney, | Austrian, .. American, .. | Miner, | 49 46 | M. M. | 1 1 | 5 2 | { Powderly, Sterrick Creek | Fatally injured by fall of roof at face of chamber. They fired a blast which discharged a prop, and while replacing it the roof fell. |
| 17 | Martin Findura, | Slavonian, .. | Miner, | 37 | M. | 1 | 3 | Sterrick Creek | Fatally injured by fall of roof at face of pillar. He fired a blast which discharged a prop that was supporting a piece of rock, and when he returned the piece fell on him. |
| 26 | Dominick Baltine, | Italian, | Laborer, | 18 | S. | .... | .... | Gravity Slope, .. | Fatally injured by fall of roof back 35 feet from face of chamber. |
| May 6 | Joseph Kaleta, | Polish, | Laborer, | 21 | S. | .... | .... | Tappans, | Fatally injured by fall of roof while shoveling at face of pillar. The miner slipped when he was about to fire. |
| 12 | John Kortess, | Slavonian, .. | Miner, | 45 | M. | 1 | 3 | Sterrick Creek, | Fatally injured by fall of roof while mining out a shot in mining bench in pillar. |
| 16 | Ignatz Mekutha, | Polish, | Laborer, | 29 | S. | .... | .... | Olyphant, | Fatally injured by falling from a ladder on which he was standing and striking his head against floor of engine room at breaker. He was helping to repair a steam pipe. Outside. |
| June 7 | John Marchlak, | Polish, | Laborer, | 47 | M. | 1 | 4 | Olyphant, | Fatally injured by fall of roof near face of pillar while cleaning a place for a prop. |
| 15 | John Rebeckin, | Polish, | Laborer, | 52 | M. | 1 | 1 | Coal Brook, .. | Fatally injured by fall of roof while standing on the middle of the track talking with a workman after his car had been taken out of mill. |
| | Frank Weisnopskie, .. | Polish, | Miner, | 34 | M. | 1 | 4 | Tappans, | Fatally injured by fall of roof along heading road. The mine foreman told him to come back 500 feet further from the face of the heading in order to secure or take this piece down, and while he was explaining what was to be done the piece fell. |
| | John Gorchulsky, | Polish, | Laborer, | 36 | M. | 1 | 6 | Olyphant, | Fatally injured by fall of roof while preparing to load a car at face of chamber. |

Lackawanna

TABLE 4.—Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|------------------------|----------------|------------------|-----|-------------------|------------------|-------------------|------------------|------------|--|
| June 25 | Santa Spitiña, | Italian, | Laborer, | 22 | S. | ... | ... | Raymond, | | Fatally injured by fall of roof 40 feet back from chamber pillar that was being taken out. He was standing under the piece of roof that fell, talking with the miner and laborer. |
| July 9 | Marc Merino, | Russian, ... | Miner, | 42 | M. | 1 | 7 | Olyphant, | | Fatally injured by fall of roof at face of heading. He had fired a blast and had returned to the face, and while sitting on a piece of coal a piece of roof fell. |
| Aug. 11 | Samuel Fabiano, | Italian, | Miner, | 34 | M. | 1 | 4 | Olyphant, | | Fatally injured by fall of coal at face of pillar while mining out a shot. |
| 18 | Angelo Serlanni, | American, ... | Brakeman, ... | 18 | S. | ... | ... | Coal Brook, ... | | Fatally injured by mine cars pushed by a third car from the front end as the trip was being pushed from the breaker to the mine. The first four cars jumped off the track and in some manner he was fatally injured. |
| Sept. 7 | Stephen Komanicky, ... | American, ... | Slatepicker, ... | 15 | S. | ... | ... | Olyphant, | Lackawanna | Fatally injured by a scraper lue in breaker. It was quitting time and he was taking a short cut, going under the railing of scraper line, when he was caught by the moving scrapers. Died a few days later. Outside. |
| 9 | Reese Charles, | Welsh, | Engineer, | 19 | M. | 1 | 3 | Olyphant, | | Fatally injured in compressor room. He was taking a discharge cap off the compressor and forgot to close the main valve that controlled the total air pressure. When he had the cap nearly off the excessive pressure broke the cap and the remaining air struck him and hurled him against the wall of the building. Outside. |
| 16 | Michael Kurcalne, ... | Austrian, ... | Miner, | 28 | M. | 1 | 3 | Olyphant, | | Fatally injured by fall of roof at face of chamber while shoveling coal back to the laborer. |

| | | | | | | | | | | | |
|----------|-------------------------|----------------|----------------|-------|----|----|------|------|-------------------|-------|---|
| Sept. 20 | Richard Burke, | American, .. | Driver, .. | ..... | 17 | S. | .... | .... | Tappans, ..... | ..... | Fatally injured by being squeezed between side of loaded car and upper side of heading. On this date he was riding on the rear end of loaded trips in order to give light to the driver in case his lamp became extinguished. He tried to run ahead of the trip, but was caught between the cars being pulled by two mules, when he was caught. |
| Oct. 19 | James Fitzpatrick, | American, .. | Driver, .. | ..... | 19 | S. | .... | .... | Tappans, ..... | ..... | Fatally scalded. While pulling a trip of empty cars in the heading from roof of slope it was necessary to pass over one side of shaft foot, both cages always being left at foot, no coal being hoisted in shaft. Some repairs were being made on one side of foot. The workmen signaled the engineer to pull the cage up to see if their work had been done right and then the cage came down for a few minutes. When the driver came along, not knowing the cage had been removed, he walked into the sump. |
| | Vincent Ward, | American, .. | Brakeman, .... | ..... | 17 | S. | .... | .... | Coal Brook, ... | ..... | Fatally injured by cars on heading road. He was riding on rear end of electric motor that was pulling three loaded cars and in some unknown manner he fell under trip. |
| 22 | Joseph Pettehot, | Italian, | Doorman, ..... | ..... | 61 | M. | 1 | ... | Coal Brook, ... | ..... | Fatally injured. A trip of two loaded cars pushed by a motor caught him against the door that he was tending on main road. |
| Nov 18 | William Evans, | Welsh, | Runner, ..... | ..... | 18 | S. | ... | .... | Raymond, ..... | ..... | Fatally injured by a kick from a mule in the heading road. He was driving a cage of a team of mules that were halting with a trip of empty cars, when the mule kicked him. |
| | Joseph Blodis, | Polish, | Laborer, ..... | ..... | 62 | M. | 1 | ... | Olyphant, ..... | ..... | Fatally injured by fall of roof near face of chamber while loading car of coal. |
| 19 | Joseph McAnvic, | American, .. | Laborer, ..... | ..... | 28 | M | 1 | 1 | Gravity Slope, .. | ..... | Fatally injured by fall of roof near face of chamber while loading car of coal in the morning before the miner had examined the chamber. The chamber should have been secured with collars at least a couple of days prior to this date. |
| 23 | Israel Parsons, | English, ... | Miner, .... | ..... | 45 | M. | 1 | 1 | Coal Brook, ... | ..... | Fatally injured by fall of roof near face of chamber while loading car of coal. The fall damaged a collar that was supporting part of it. There should have been two collars supporting the piece. |
| Dec. 1 | Paul Hobjinski, | Austrian, .. | Miner, ..... | ..... | 49 | M. | 1 | 7 | Erie, ..... | ..... | Fatally injured by flying coals from blast in his chamber. He charged a hole ready to fire and then commenced loading out loose coal at face of chamber, when the charge exploded. |

Lackawanna

TABLE 4 —Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|--------|-----------------------|----------------|----------------|-----|-------------------|------------------|-------------------|------------------|------------|---|
| | | | | | | | | | | |
| Dec. 8 | John Bojohimny, | Polish, | Laborer, | 40 | M. | 1 | 2 | Coal Brook, ... | | Fatally injured by fall of roof near face of heading. The miner discovered the dangerous place of roof and told the others to step back and he would pull it down but the roof fell before the laborer had time to step back. |
| 14 | John Bridget, | Italian, | Laborer, | 59 | M. | .... | .... | Powderly, | Lackawanna | Fatally injured by trip of loaded mine cars near head of slope. He was shoveling snow from the track and as the day was stormy he was muffled up around the ears and could not hear the cars coming. Out-side. |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|--------|-------------------------|---------------|---------------|-----|-------------------|--------------------|------------|---|
| Jan. 1 | Charles Oldenreich, ... | Austrian, ... | Laborer, ... | 67 | M. | Sunnyside, ... | Lackawanna | Leg fractured. Struck by a piece of frozen coal that rolled down the back while shoveling coal in conveyor line. Outside. |
| 9 | Dem Pelachayk, ... | Polish, ... | Laborer, ... | 30 | M. | Powderly, ... | | Leg fractured. Struck by a piece of coal that burst off pillar while loading car at face of pillar. |
| 12 | Thomas Finan, ... | American, ... | Miner, ... | 45 | M. | Coal Brook, ... | | Arm fractured by a piece of roof falling on him at face of chamber. |
| 19 | Don. Loucheni, ... | Italian, ... | Driver, ... | 19 | S. | Riverside, ... | | Leg fractured by falling under loaded mine cars along heading road. He slipped on the rail. |
| 22 | Theodore Botnes, ... | Russian, ... | Miner, ... | 30 | M. | Powderly, ... | | Leg fractured by a piece of top coal falling on him while barring loose coal at face of chamber. |
| 25 | John Dalton, ... | American, ... | Miner, ... | 41 | S. | Coal Brook, ... | | Leg and one rib fractured by fall of roof at face of chamber while drilling a hole. |
| 27 | Casper Wagner, ... | American, ... | Miner, ... | 29 | S. | Coal Brook, ... | | Arm fractured, thumb cut off and hands, head and face lacerated by blast in chamber. He thought the fuse was extinguished and returned to relight it, when the charge exploded. |
| 28 | Edward Dempsey, ... | American, ... | Miner, ... | 52 | M. | Coal Brook, ... | | Leg fractured and back bruised by fall of roof at face of chamber while shoveling coal. |
| Feb. | John Pienyar, ... | Polish, ... | Miner, ... | 21 | S. | Tappans, ... | | Hip fractured by fall of roof close against the chamber. |
| | Joseph Serlianna, ... | Italian, ... | Brakeman, ... | 17 | S. | Coal Brook, ... | | Two fingers cut off and hand lacerated. Hand was caught by wheel of motor while holding a latch on heading road. |
| | Michael Kazup, ... | Russian, ... | Laborer, ... | 39 | M. | Coal Brook, ... | | Thigh fractured and back bruised by fall of roof at face of chamber while shoveling coal to car. |
| | Minor Vannort, ... | German, ... | Miner, ... | 50 | M. | West Mountain, ... | | Back injured by fall of roof in cross-cut. He was driving from his chamber through the pillar. |

TABLE 5.—Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|------------------------|----------------|--------------------|-----|-------------------|----------------------|------------|--|
| Feb. 10 | Joseph Davey, | American, .. | Runner, | 21 | S. | Jermyn, | Lackawanna | Injured about the stomach by mine car while helping to place it on track along heading road. |
| 11 | Dominick Gravine, ... | Italian, | Laborer, | 54 | M. | Gravity Slope, | | Big toe fractured by an iron bar falling on it in face of chamber. |
| | Nicholas Scalgo, | Italian, | Headman, | 39 | S. | Powderly, | | Arm fractured and back bruised by falling mine car while unhooking the rope from a strip of cars on the head of slope. Outside. |
| 13 | William Howells, | Welsh, | Miner, | 39 | M. | Tappaus, | | Seriously injured about the face, eyes and hands by a blast in rock. The hole had missed firing twice, and he was returning the third time when the powder exploded. |
| 19 | Benjamin Harris, ... | American, .. | Laborer, | 53 | M. | Olyphant, | | Leg mangled by being struck by a locomotive when he stepped on track after a loaded trip had passed by. Outside. |
| 24 | Peter Rose, | Italian, | Laborer, | 38 | M. | Olyphant, | | Two fingers cut off by being caught between a rope and pulley used for pulling the car to face of airway. He thought the rope was slipping off the pulley and took hold of it. |
| March 2 | Earl R. Shaffer, | American, .. | Driver, | 23 | M. | Powderly, | | Ankles severely bruised. While attempting to get on wagon the team started and he was thrown under the wheels. Outside. |
| 6 | Anthony Saladonisi, .. | Russian, ... | Miner, | 30 | M. | Powderly, | | Arm and two ribs fractured by fall of roof while tamping a charge at face of chamber. |
| 9 | Vito Cerro, | American, .. | Slatepicker, | 15 | S. | Coal Brook, | | Wrist fractured by falling across a chute in breaker. Outside. |
| 23 | John B. Valase, | Italian, | Miner, | 54 | M. | Riverside, | | Arm fractured by a piece of roof falling on him while standing prop in face of chamber. |

| | | | | | | | |
|----------|-------------------------|----------------|-----------------|----|----|------------------------|---|
| March 24 | Chas. Radicz, | Russian, ... | Laboret, ... | 39 | M. | Powderly, | Leg fractured by fall of roof at face of chamber while loading car of coal. |
| 27 | Frank Arthur, | American, .. | Miner, | 38 | M. | Coal Brook, | Three ribs fractured by fall of roof at face of chamber while sounding the same. |
| April 10 | John Stefanovich, | Slavonian, ... | Laborer, | 36 | M. | Coal Brook, | Two bones in hand broken by piece of rock falling on him at face of chamber. |
| 12 | Lester Harrison, | American, ... | Doorboy, | 16 | S. | Gravity Slope, | Leg fractured by fall of roof at face of chamber, and had it earthed when the trip struck the door and knocked him down. |
| 19 | Patrick Powers, | American, ... | Driver, | 19 | S. | Jermyn, | Leg fractured. While riding between two empty cars along heading road, one of them ran off the track, and the other jumped against his leg. |
| 22 | Mike Besalico, | Greek, | Miner, | 47 | M. | Sterrick Creek, | Seriously injured about the body by fall of roof at face of pillar while drilling hole. |
| 27 | Michael Jordan, | American, ... | Miner, | 47 | M. | Coal Brook, | Knee cap fractured by falling off mine car on which he was riding along haulage road. |
| May 7 | John Nelson, | American, ... | Brakeman, ... | 24 | S. | Powderly, | Cut hand and fracture of finger. While coupling a truck to a mine car his hand was caught and squeezed. Outside. |
| 8 | Christopher Murray, .. | American, ... | Miner, | 47 | M. | Coal Brook, | Injured internally by fall of coal at face of chamber while mining out a shot with a pick. |
| 10 | { Carl Hoffman, | German, | Miner, | 32 | M. | } Gravity Slope, | { Hands and leg burned by blasting powder. While they were pushing the charge into a hole in the bottom rock it was ignited in some unknown manner. |
| | { Dominick Faone, ... | Italian, | Laborer, | 23 | S. | | { |
| | Michael Freast, | Italian, | Miner, | 29 | M. | Coal Brook, | Legs fractured by mine car on heading road. He was walking to his place of work when a mine car ran away from a chamber and struck him. |
| 12 | Ralph Morasco, | Italian, | Tracklayer, ... | 45 | M. | Gravity Slope, | Shoulder dislocated. Struck by trip of cars along heading road. He was standing too close to track. |
| 15 | Thomas McManamon, ... | American, ... | Driver, | 18 | S. | Powderly, | Hands severely injured by being caught in the trace hook while hitching mule to trip of cars along heading road. |
| June 7 | Simon Shilgoi, | Russian, ... | Miner, | 27 | S. | Olyphant, | Leg fractured by fall of roof at face of chamber. |
| 8 | Joseph A. Mackrell, ... | American, ... | Runner, | 19 | S. | Olyphant, | Ruptured while lifting a sprag from wheel of loaded car. |
| | Dominick Rotell, | Italian, | Miner, | 24 | S. | Gravity Slope, | Leg fractured by trip of loaded cars one of which struck him on the head. |
| 10 | Metro Barilchok, | Austrian, ... | Laborer, | 38 | M. | Olyphant, | Ribs fractured and back injured by fall of roof at face of chamber. |
| | Geo. Wilk, | American, ... | Driver, | 18 | S. | Coal Brook, | Two teeth knocked out and face injured by being kicked by a mule. He was walking behind the mule along heading road. |
| 11 | Peter Fodoszak, | American, ... | Runner, | 22 | M. | Jermyn, | Hand bruised by mine car while moving a latch on heading road. |
| 14 | Walter Scott, | American, ... | Laborer, | 20 | S. | Powderly, | Back injured by falling off ladder in chamber. |

Lackawanna

TABLE 5.—Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|------------------------------|----------------|-----------------|-----|-------------------|----------------------|------------|--|
| June 18 | John Woodrick, | Austrian, .. | Laborer, | 38 | M. | Olyphant, | Lackawanna | Leg fractured and otherwise injured by flying coals from blast in face of chamber. |
| 29 | Felix Leo, | American, .. | Brakeman, | 19 | S. | Powderly, | | Hand badly injured by mine car while trying to close a latch on heading road. |
| | Kenneth Swift, | American, .. | Driver, | 17 | S. | Gravity Slope, | | Hand badly bruised by mine car catching him against block in chamber while blocking car. |
| 25 | John Bicko, | Slavonian, .. | Laborer, | 44 | M. | Gravity Slope, | | Body bruised by falling off lumber car and striking another car on railroad. |
| | Stanley Broda, | Pellsh, | Laborer, | 29 | M. | Olyphant, | | Index finger cut off and hand injured. Hand was caught by wheels while pulling blocks loose from under car at face of chamber. |
| July 1 | William Haspamewieski, | Lithuanian, .. | Laborer, | 29 | S. | Coal Brook, | | Leg fractured by a piece of coal falling on him while barring loose coal at face of chamber. |
| 3 | Laddie Perkoste, | Polish, | Laborer, | 24 | M. | Coal Brook, | | Leg fractured by fall of roof while loading car at face of pillar. |
| 8 | William Reese, | American, .. | Brakeman, | 18 | S. | Olyphant, | | Hips and arms injured. Caught between motor and car of sand along heading road. The car of sand jumped off the track. |
| | George Stebodnik, | American, .. | Doorboy, | 16 | S. | Jermyn, | | Legs fractured by being caught between trolley car and pillar. He had forgotten to turn the handle for the trolley car. |
| | | | | | | | | He was pushed from the track by a motor pushing a trip of empty cars run in on the chamber track against another motor and caught him. |
| 13 | Thomas Siddons, | American, .. | Laborer, | 31 | M. | Gravity Slope, | | Big toe fractured by a piece of coal falling on him while loading car at face of chamber. |
| 16 | John McFadden, | American, .. | Miner, | 30 | S. | Coal Brook, | | Foot badly crushed between mine cars on which he was riding on his way home. The trip of cars bumped suddenly. Out side. |
| 17 | William Kolish, | Polish, | Laborer, | 21 | S. | Gravity Slope, | | End of finger cut off while spragging mine car in chamber. |

Injured by fall of roof at face of pillar. He returned to the face after firing a shot when the piece fell on him. Three fingers cut off near first joint while helping to replace mine locomotive on the track.

Leg fractured by falling off a mule's back while taking it from the blacksmith shop. Trip was made to White Sulphur Springs, Pa. rail from alongside heading road it fell on his toe.

Forefinger severed at first joint by a mine car while lifting it on the track along main road.

Ankle dislocated by being thrown from a trip of mine cars on main road.

Polys contused. He was driving a mule and when he was about to hitch it to a car on heading road, the mule kicked him.

Leg fractured above knee. He was employed in a car driver. The mule was taking a trip of empty cars into the heading when the rear car jumped off the track and Davis was running alongside of this car intending to call the motorman's attention to it when the car swung over and caught him against a concrete wall.

Face lacerated by being kicked by a mule along heading road.

Foot crushed by mine car in chamber. He removed the block from under the wheel and the car started and jumped off the track.

Spinal bone in leg fractured. Caught between bumpers of loaded cars while trying to couple them while in motion along heading road.

Injured internally by a screen jacket falling against him while screening sand near foot of shaft.

Back badly bruised by being struck by a rope and thrown against a large stone near tip where the cars were unloaded.

Leg broken below the knee. While crossing tracks between trip of loaded cars the locomotive bumped the rear end of trip and his leg was caught between cars.

Outside.

Knee cap fractured. While assisting to replace a loaded car on track that was derailed in his chamber, the cover broke and he was thrown to the ground.

| | | | | | | | |
|-------|----|------------------------|-----------------|------------------|----|----|----------------------|
| Aug. | 6 | Latseo Chuplinski, ... | Polish, | miner, | 45 | M. | Raymond, |
| | 9 | Barney Provehck, ... | Polish, | Laborer, | 21 | S. | Coal Brook, |
| | 13 | Frank Gabriel, | American, | Driver, | 18 | S. | Coal Brook, |
| | 27 | Patrick Powers, | American, | Driver, | 19 | S. | Jernyn, |
| | 31 | Martin Raznos, | Polish, | Laborer, | 27 | M. | Gravity Slope, |
| Sept. | 8 | Frank King, | American, | Engineer, | 24 | M. | Coal Brook, |
| | 14 | Frank Bergen, | American, | Laborer, | 21 | M. | Olyphant, |
| | 17 | David J. Davis, | Welsh, | Laborer, | 32 | M. | Olyphant, |
| | | | | | | | |
| | | Clifford Fallon, | American, | Driver, | 17 | S. | Powderly, |
| | | Walter Bryll, | Polish, | Laborer, | 23 | M. | Coal Brook, |
| | | | | | | | |
| | 23 | Edward Shallock, | American, | Driver, | 17 | S. | Jernyn, |
| Oct. | 14 | Thomas Williams, ... | Welsh, | Company man, ... | 33 | S. | Olyphant, |
| | 16 | Edward Coleman, | American, ... | Laborer, | 63 | M. | Gravity Slope, |
| | 19 | I. P. Hollister, | American, ... | Foreman, | 58 | M. | Olyphant, |
| | 22 | Frank Long, | Italian, | Miner, | 47 | M. | Gravity Slope, |

Lackawanna

TABLE 5.—Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|--------|-----------------------|-------------------|----------------|-----|-------------------|-----------------------|------------|---|
| Nov. 8 | John Stilko, | Lithuanian, | Runner, | 19 | S. | Olyphant, | Lackawanna | Hand badly lacerated and some bones broken. He was about to unhitch mule from a trip of loaded cars on heading road when his light was extinguished. He tumbled and fell and his hand was caught under a wheel. |
| 18 | Baldo Cardoni, | Italian, | Miner, | 32 | M. | Sterrick Creek, | | Shoulder injured and three ribs fractured by fall of roof at face of working place. |
| 19 | Frank Boots, | American, | Driver, | 18 | S. | Powderly, | | Legs fractured below the knee and head of body bruised. While riding on front end of trip of loaded cars he fell between them. |
| 24 | Andrew Domenico, ... | Italian, | Laborer, | 26 | M. | Riverside, | | Leg fractured below the knee. The head-man neglected to hitch the rope to a trip of two empty cars which ran down the slope and caught Domenico, who was standing on slope road. |
| Dec. 1 | Lewis Peduto, | Italian, | Miner, | 32 | M. | Coal Brook, | | Leg fractured and face lacerated by fall of roof at face of chamber while barring |
| 2 | William Roster, | American, | Driver, | 20 | S. | Coal Brook, | | Loss caused by being thrown from a mule's back while taking it to the barn. Outside. |
| 7 | James H. Baker, | American, | Driver, | 19 | S. | Coal Brook, | | Index finger cut off by being caught between wheels of car that he was spragging. |
| 11 | Major Heath, | English, ... | Miner, | 47 | M. | Coal Brook, | | Head and back badly bruised by fall of roof at face of chamber. Immediately after firing a blast he returned to the face, when the roof fell. |
| 21 | William Bell, | English, ... | Miner, | 63 | M. | Olyphant, | Lackawanna | Leg fractured and arm injured by being struck by flying coals from a blast in chamber. After lighting the squib he had retreated only five or six feet when the chamber exploded. |
| 22 | Michael Rosone, | Russian, ... | Laborer, | 33 | M. | Powderly, | | Compound fracture of leg. While repairing track along heading road a pulley came loose and the haulage rope struck him. |

CONDITION OF COLLIERIES

DELAWARE AND HUDSON COMPANY

Olyphant and Coal Brook Collieries.—Ventilation, roads, drainage and condition as to safety, good.

Gravity Slope and Jermyn Collieries.—Ventilation, roads and drainage, fair. Condition as to safety, good.

Powderly Colliery.—Ventilation, roads and condition as to safety, good. Drainage, fair.

TEMPLE COAL COMPANY

Sterrick Creek Colliery.—Ventilation, roads, drainage and condition as to safety, good.

SCRANTON COAL COMPANY

Raymond Colliery.—Ventilation, roads and drainage, fair. Condition as to safety, good.

Riverside Colliery.—Ventilation, roads and drainage, fair. Condition as to safety, good.

HILLSIDE COAL AND IRON COMPANY

Erie Colliery.—Ventilation, roads and drainage, fair. Condition as to safety, good.

ARCHBALD COAL COMPANY

Tappans Colliery.—Ventilation, roads and drainage, fair. Condition as to safety, good.

WEST MOUNTAIN COAL COMPANY

West Mountain Colliery.—Ventilation, roads, drainage and condition as to safety, good.

HUMBERT COAL COMPANY

Sunnyside Colliery.—Ventilation, roads, drainage and condition as to safety, fair.

SACANDAGA COAL COMPANY

Sacandaga No. 3 Colliery.—Ventilation, roads, drainage and condition as to safety, fair.

FALL BROOK COAL COMPANY

Murrin's Colliery.—Ventilation, roads, drainage and condition as to safety, fair.

IMPROVEMENTS

HUDSON COAL COMPANY

Olyphant Colliery.—Outside: One Duplex 20 by 36 inch slush pump was installed for pumping culm into mines. Installed one 14 by 20 inch Flory second motion hoisting engine on surface, No.

14 plane, New County vein. Grassy Island No. 2 shaft. Installed one 18 by 36 inch Dickson first motion hoisting engine on surface, Dunmore vein, No. 4 plane, Grassy Island No. 2 shaft.

Coal Brook Colliery.—Outside: Changed main and steamboat rolls to slow-gearred rolls. Installed in the power plant a 1600 KVA 2300 volt, 25-cycle, 3-phase, G. E. generator, with a 28 by 44 by 42 Hamilton-Corliss compound non-condensing engine, and one 600 KW G. E. frequency changer, changing 25 cycle to 60 cycle, 2300 volts, 3-phase.

Powderly Colliery.—Outside: Installed 6 Wilmot jigs in the east end of the breaker. Equipped each of the six boilers in boiler plant with Coppus blowers.

Jermyn Colliery.—Outside: Boiler plant was enlarged by the installation of 926 HP B. and W. Stirling boilers. An electric hoist was installed No. 8 plane, 730 HP, 250 volt, direct current. Also installed one 250 G. E. Co. 250 KW, 250 volt D. C. belt driven generator, and a 22 by 22 McEwen engine in power house. Installed one Joplin jig in washery.

SCRANTON COAL COMPANY

Raymond Colliery.—Two 300 horse power boilers were installed.

HILLSIDE COAL AND IRON COMPANY

Erie Colliery.—A rock tunnel, 7 feet by 12 feet and 400 feet in length, was driven from the Clark vein to the New County vein, to facilitate inside transportation. Many of the motor roads have been regraded.

ARCHBALD COAL COMPANY

Tappans Colliery.—No. 2 New County slope has been extended a distance of 2500 feet on a gradient of 7 degrees, and two rock slopes were driven from this slope a distance of 300 feet, each, to reach the coal in the Dunmore veins on the Archbald anticlinal. A new slope has been started in the Dunmore vein and is now down a distance of 200 feet on a gradient of 4 degrees.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen, was held in Watt's Hall, Carbondale, May 18 and 19. The Board of Examiners was composed of P. J. Moore, Mine Inspector, Carbondale; Richard Beer, Engineer, Carbondale; John F. Boland, Miner, Carbondale; David Evans, Miner, Olyphant.

The following persons passed a satisfactory examination and were granted certificates:

MINE FOREMEN

Frank J. Hevers, John J. Ford, Patrick J. O'Rourke, Michael F. Brennan, Martin F. Murphy, Archbald; William Loftus, Olyphant; Thomas H. Williams, Carbondale; Patrick J. Murray, Peckville; Martin J. Loftus, Jessup.

ASSISTANT MINE FOREMEN

Edward C. McLaughlin, Thomas A. Jordan, James Walsh, Griff I. Evans, Olyphant; William J. Williams, Blakely; William J. Rodway, James T. Stevens, Peckville; Arthur Wrightson, Mayfield; James Coughlin, Archbald.



SECOND DISTRICT

LACKAWANNA COUNTY

Scranton, Pa., March 1, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the Second Anthracite District, for the year ending December 31, 1915, as required by the Act of April 14, 1903.

Respectfully submitted,

L. M. EVANS,
Inspector

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 12 |
| Number of mines, | 26 |
| Number of mines in operation, | 21 |
| Number of tons of coal shipped to market, | 3,465,648 |
| Number of tons used at mines for steam and heat, | 421,554 |
| Number of tons sold to local trade and used by employes, | 92,597 |
| Number of tons produced, | 3,979,799 |
| Number of tons produced by compressed air machines, ..... | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 7,422 |
| Number of persons employed outside, | 1,745 |
| Number of fatal accidents inside of mines, | 29 |
| Number of fatal accidents outside, | 4 |
| Number of non-fatal accidents inside of mines, | 58 |
| Number of non-fatal accidents outside, | 1 |
| Number of tons of coal produced per fatal accident inside, | 137,234 |
| Number of tons produced per fatal accident outside, | 994,950 |
| Number of tons produced per fatal accident inside and outside, | 120,600 |
| Number of persons employed per fatal accident inside, | 256 |
| Number of persons employed per fatal accident outside, | 437 |
| Number of persons employed per fatal accident inside and outside, | 278 |
| Number of persons employed per non-fatal accident inside, | 128 |
| Number of persons employed per non-fatal accident outside, | 1,745 |
| Number of persons employed per non-fatal accident inside and outside, | 155 |
| Number of wives made widows, | 23 |
| Number of children made orphans, | 56 |
| Number of steam locomotives used inside of mines, ..... | ..... |
| Number of steam locomotives used outside, | 14 |
| Number of compressed air locomotives used inside, | 35 |
| Number of compressed air locomotives used outside, ..... | ..... |
| Number of electric motors used inside, | 54 |
| Number of electric motors used outside, ..... | ..... |
| Number of gasoline locomotives used inside, ..... | ..... |
| Number of fans in use, | 26 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 22 |
| Number of non-gaseous mines in operation, | 4 |
| Number of new mines opened, | 2 |
| Number of old mines abandoned, ..... | ..... |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|---|------------------|
| Delaware and Hudson Company. | 2,135,473 |
| Delaware, Lackawanna and Western Railroad Com- pany, | 1,305,188 |
| Scranton Coal Company, | 454,393 |
| Bulls Head Coal Company, | 61,546 |
| Clearview Coal Company, | 23,199 |
| Total, | <u>3,979,799</u> |

Production by Counties

| | |
|-------------------|------------------|
| Lackawanna, | <u>3,979,799</u> |
|-------------------|------------------|

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|--|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| Delaware and Hudson Co., | 16 | 2 | 18 | 31 | ..... | 31 | 133,467 | 68,886 | 3,545 | 921 | 4,466 | 222 | 462 | 114 | ..... |
| Delaware, Lackawanna and Western Railroad Co., | 5 | 2 | 7 | 13 | 1 | 14 | 261,037 | 100,399 | 2,747 | 435 | 3,182 | 549 | 218 | 211 | 435 |
| Scranton Coal Co., | 7 | ..... | 7 | 10 | ..... | 10 | 64,913 | 45,439 | 886 | 328 | 1,224 | 128 | ..... | 90 | ..... |
| Pulls Head Coal Co., ..... | ..... | ..... | ..... | 2 | ..... | 2 | 36 | 30,773 | 136 | 35 | 171 | ..... | ..... | 68 | ..... |
| Clearview Coal Co., | 1 | ..... | 1 | 2 | ..... | 2 | 23,199 | 11,599 | 98 | 26 | 124 | 98 | ..... | 49 | ..... |
| Totals and averages, | 29 | 4 | 33 | 58 | 1 | 59 | 137,234 | 68,617 | 7,422 | 1,745 | 9,167 | 256 | 437 | 128 | 1,745 |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of roof, | 2 | .... | .... | 3 | 4 | .... | 1 | 1 | 2 | 1 | 2 | .... | 16 | 55.17 |
| Mine cars, | 1 | .... | .... | 1 | .... | 1 | .... | 1 | .... | 1 | .... | .... | 5 | 17.24 |
| Blasts, premature and otherwise, ..... | .... | 2 | .... | .... | 2 | .... | .... | .... | 1 | .... | 1 | .... | 6 | 20.69 |
| Falling into shafts, ..... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 3.45 |
| Electricity, ..... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 3.45 |
| Totals, | 3 | 2 | 1 | 5 | 6 | 1 | 1 | 2 | 3 | 2 | 3 | .... | 29 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, ..... | .... | .... | 1 | 1 | .... | .... | .... | .... | .... | .... | .... | .... | 2 | 50.00 |
| Machinery, ..... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | 2 | 50.00 |
| Totals, ..... | .... | 1 | 1 | 1 | .... | .... | .... | .... | .... | .... | 1 | .... | 4 | 100.00 |
| Grand totals inside and outside, | 3 | 3 | 2 | 6 | 6 | 1 | 1 | 2 | 3 | 2 | 4 | ... | 33 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of roof, | 1 | .... | 1 | 1 | 2 | 4 | 2 | 2 | 1 | 1 | 1 | 1 | 17 | 29.31 |
| Mine cars, | 2 | 4 | .... | 1 | .... | 1 | 1 | 2 | 1 | 4 | 2 | 2 | 20 | 34.49 |
| Explosions of gas, ..... | .... | .... | 1 | .... | .... | 2 | 1 | .... | 1 | .... | .... | .... | 5 | 8.62 |
| Explosions of powder and dynamite, ..... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 1.72 |
| Blasts, premature and otherwise, ..... | .... | 1 | .... | .... | 3 | 1 | 1 | .... | .... | .... | .... | .... | 6 | 10.35 |
| Struck by rock, ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | .... | 1 | 1.72 |
| Mules, ..... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 1.72 |
| Falling, | 1 | .... | .... | .... | .... | 1 | .... | .... | .... | .... | 1 | .... | 3 | 5.17 |
| Struck by rope, ..... | .... | .... | .... | .... | .... | 1 | 1 | .... | .... | .... | .... | .... | 2 | 3.45 |
| Struck by axe, ..... | .... | .... | .... | .... | .... | 1 | .... | .... | 1 | .... | .... | .... | 2 | 3.45 |
| Totals, | 4 | 6 | 3 | 2 | 5 | 11 | 6 | 4 | 4 | 6 | 4 | 3 | 58 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Struck by casting, .... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | 1 | 100.00 |
| Totals, ..... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | 1 | 100.00 |
| Grand totals inside and outside, | 4 | 6 | 3 | 2 | 5 | 12 | 6 | 4 | 4 | 6 | 4 | 3 | 59 | ..... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | — Months | | | | | | | | | | | | Totals |
|--|----------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, | 2 | 1 | .... | 1 | 4 | .... | .... | 1 | 2 | 1 | .... | .... | 12 |
| Miners' laborers, | 1 | 1 | .... | 4 | 2 | 1 | 1 | .... | 1 | .... | 2 | .... | 13 |
| Doorboys and helpers, ..... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | 1 | .... | .... | 1 |
| Company men, ..... | .... | .... | 1 | .... | .... | .... | .... | 1 | .... | .... | 1 | .... | 2 |
| Footmen, ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 |
| Totals, | 2 | 2 | 1 | 5 | 6 | 1 | 1 | 2 | 3 | 2 | 3 | .... | 29 |
| Outside | | | | | | | | | | | | | |
| Engineers and firemen, ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | 1 |
| Slatepickers (men), ..... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 |
| Laborers, ..... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 |
| Miners, ..... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | 1 | .... | 1 |
| Totals, ..... | .... | 1 | 1 | 1 | .... | .... | .... | .... | .... | .... | 1 | .... | 4 |
| Grand totals inside and outside, | 2 | 3 | 2 | 6 | 6 | 1 | 1 | 2 | 3 | 2 | 4 | .... | 33 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Assistant mine foremen, | | | | 1 | 4 | 7 | 1 | ..... | 1 | ..... | ..... | ..... | 2 |
| Miners, | | | | | | | | | | | | | 26 |
| Miners' laborers, | | | | 1 | 1 | 2 | ..... | ..... | ..... | ..... | ..... | ..... | 12 |
| Drivers and runners, | | | | | | | | | | | | | 12 |
| Doorboys and helpers, | | | | | | | | | | | | | 2 |
| Company men, | | | | | | | | | | | | | 1 |
| Brakemen, | | | | | | | | | | | | | 2 |
| Footmen, | | | | | | | | | | | | | 1 |
| Totals, | 4 | 6 | 3 | 2 | 5 | 11 | 6 | 4 | 4 | 6 | 4 | 3 | 55 |
| Outside | | | | | | | | | | | | | |
| Footmen, | | | | | | | 1 | ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, | | | | | | | 1 | ..... | ..... | ..... | ..... | ..... | 1 |
| Grand totals inside and outside, | 4 | 6 | 3 | 2 | 5 | 11 | 6 | 4 | 4 | 6 | 4 | 3 | 56 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| American, | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 | 3 |
| English, | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | 2 |
| Polish, | 3 | 1 | ... | 4 | 5 | ... | ... | ... | ... | 1 | ... | 14 |
| Hungarian, | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| Italian, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Slavonian, | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | 2 |
| Lithuanian, | ... | 1 | ... | 3 | ... | ... | 1 | 1 | 1 | ... | 1 | 7 |
| Russian, | ... | 1 | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | 3 |
| Totals, | 3 | 3 | 2 | 6 | 6 | 1 | 1 | 2 | 3 | 2 | 4 | 33 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| American, | ... | 1 | ... | ... | 1 | 3 | 2 | 1 | 1 | 2 | ... | 11 |
| English, | ... | ... | 1 | ... | 1 | ... | 1 | 1 | ... | ... | 1 | 4 |
| Welsh, | ... | ... | 1 | ... | 1 | ... | ... | ... | 1 | ... | ... | 3 |
| Irish, | ... | ... | 1 | 1 | ... | 1 | 1 | ... | ... | ... | ... | 3 |
| Polish, | 2 | 1 | 1 | 1 | 1 | 5 | 1 | 1 | ... | 1 | 1 | 16 |
| Hungarian, | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| Italian, | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 |
| Lithuanian, | 2 | 1 | ... | ... | 2 | ... | 1 | 1 | ... | ... | 2 | 13 |
| Russian, | ... | 1 | ... | ... | ... | 1 | ... | ... | 1 | 1 | ... | 4 |
| Totals, | 4 | 6 | 3 | 2 | 5 | 12 | 6 | 4 | 4 | 6 | 4 | 59 |

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|--|----------------|--|--------------------------------------|--|---|-----------------------|
| Delaware and Hudson Co. Eddy Creek, Von Storch, Marvine, Leggett Creek, Washeries, Middletown, Leferts Creek, Von Storch, Eddy Creek, | Lackawanna, | E. R. Pettibone, inside, Charles Dorrance, Jr., Outside. | Dorrancton, Scranton, | Thomas R. Thomas, Inside, Fred Warner, Outside, James W. Boyd, ... | Olyphant, Scranton, Scranton, | Delaware and Hudson |
| Delaware, Lackawanna and Western Railroad Co. Storrs, Cayuga, Brishin, Washeries, Storrs, Cayuga, Brishin, | Lackawanna, | C. E. Tobey, | Scranton, | Walter Reese, | Scranton, | D. L. and W. |
| Scranton Coal Co. Johnson, Richmond No. 3, West Ridge, | Lackawanna, | Daniel Young, Sr., ... | Scranton, | { J. J. Aitken, { J. J. Aitken, { J. F. Cummings, .. | Pfeeburg, Pfeeburg, Scranton, | { N. Y. O. and W. \| |
| Bulls Head Coal Co. Church, | Lackawanna,... | Charles H. Walker, Inside, | Scranton, | John J. Law, | Scranton, | N. Y. O. and W. |
| Clearview Coal Co. Conklin, | Lackawanna,... | William McLaughlin, | Scranton, ..... | ..... | ..... | D. L. and W. |

TABLE 2.—Number of tons of coal mined, number of days worked; number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|---|-------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Delaware and Hudson Co. | | | | | | | | | | | | | |
| Eddy Creek, | Lackawanna, | 655,116 | 13,086 | 4 | 678,206 | 276 | 1,410 | 6 | 12 | 776,150 | 3,696 | 29,040 | 97 |
| Von Storch, | | 495,900 | 35,732 | 8,794 | 450,366 | 255 | 1,208 | 7 | 6 | 835,850 | 95,810 | ..... | 100 |
| Marvine, | | 557,110 | 29,428 | 4,595 | 591,133 | 267 | 902 | 4 | 7 | 527,275 | 83,723 | ..... | 61 |
| Legitts Creek, | | 257,156 | 10,356 | 11,628 | 282,160 | 225 | 808 | 1 | 6 | 481,325 | 42,169 | ..... | 54 |
| Washeries | | | | | | | | | | | | | |
| Marvine, | Lackawanna, | 1,687,322 | 89,182 | 25,961 | 1,802,465 | ..... | 4,363 | 18 | 31 | 2,629,580 | 225,398 | 29,040 | 315 |
| Legitts Creek, | | 114,627 | 59,822 | ..... | 165,449 | 278 | 37 | ..... | ..... | ..... | ..... | ..... | ..... |
| Von Storch, | | 61,476 | 87,338 | ..... | 87,338 | 24 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Eddy Creek, ..... |  | ..... | 17,296 | ..... | 78,682 | 145 | 37 | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, | | | | | | | | | | | | | |
| Delaware, Lackawanna and Western Railroad Co. | | | | | | | | | | | | | |
| Storrs, | Lackawanna, | 683,560 | 45,368 | 6,474 | 745,402 | 259 | 1,886 | 6 | 12 | 874,575 | 66,927 | ..... | 104 |
| Cayuga, | | 179,496 | 15,236 | 4,657 | 199,389 | 207 | 551 | ..... | ..... | 194,475 | 74,375 | ..... | 35 |
| Brislin, | | 161,303 | 19,465 | 7,205 | 187,913 | 223 | 684 | 1 | 2 | 235,825 | 14,937 | ..... | 39 |
| Totals, | | | | | | | | | | | | | |
| Washeries | | | | | | | | | | | | | |
| Brislin, | Lackawanna, | 1,034,359 | 80,009 | 18,336 | 1,132,704 | ..... | 3,121 | 7 | 14 | 1,304,875 | 156,239 | ..... | 178 |
| Storrs, | | 78,241 | ..... | ..... | 78,241 | 181 | 28 | ..... | ..... | ..... | ..... | ..... | ..... |
| Cayuga, | | 49,216 | ..... | ..... | 49,216 | 65 | 6 | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, | | | | | | | | | | | | | |
| Totals, | | | | | | | | | | | | | |

*Included with colliery.

TABLE 2.—Continued

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|-----------------------------------|-------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Scranton Coal Co. | | | | | | | | | | | | | |
| Johnson, | Lackawanna, | 214,335 | 66,158 | 3,088 | 283,481 | 145 | 776 | 5 | 6 | 135,000 | 21,400 | ..... | 53 |
| Richmond No. 3, | | 89,320 | 18,000 | 4,860 | 112,780 | 151 | 255 | ..... | 4 | 52,500 | 6,100 | ..... | 32 |
| West Ridge, | | 47,231 | 9,500 | 1,101 | 58,132 | 129 | 193 | 2 | ..... | 74,375 | 31,400 | ..... | 21 |
| Totals, | | 351,386 | 93,658 | 9,349 | 454,391 | ..... | 1,224 | 7 | 10 | 261,875 | 58,900 | ..... | 146 |
| Bulls Head Coal Co. | | | | | | | | | | | | | |
| Church, | Lackawanna, | 29,538 | 1,800 | 30,298 | 61,546 | 284 | 171 | ..... | 2 | 63,750 | 3,550 | ..... | 29 |
| Clearview Coal Co. | | | | | | | | | | | | | |
| Conklin, | Lackawanna, | 14,456 | ..... | 8,743 | 23,199 | 47 | 124 | 1 | 2 | 16,180 | 8,440 | ..... | ..... |
| Grand totals, | | 3,465,648 | 421,554 | 92,597 | 3,979,799 | ..... | 9,167 | 33 | 59 | 4,267,200 | 452,527 | 29,040 | 663 |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|------------------------|---------------|-----------------|-----|-------------------|------------------|-------------------|------------------|------------|---|
| Jan. 9 | Walter Chyzlof, | Polish, | Laborer, | 26 | M. | 1 | 2 | Johnson, | Lackawanna | Fatally injured by a derailed car on gangway road while on his way home. |
| 21 | John Kowlowski, .. | Polish, | Miner, | 55 | M. | 1 | 3 | Eddy Creek, .. | | Fatally injured by fall of bell roof at face of chamber, while mining out a blast. |
| 29 | Frank Ranakowski, .. | Polish, | Miner, | 33 | M. | 1 | 2 | Johnson, | | Killed by fall of roof at face of chamber while examining a blast. |
| Feb. 11 | Frank Yourski, | Russian, ... | Slatepicker, .. | 40 | M. | 1 | 2 | Marvine, | | Fatally injured by broken machinery while working on a fall of roof at face of chamber. |
| 17 | John Wassic, | Polish, | Laborer, | 25 | S. | .... | .... | Conklin, | | Killed by blast at working place while stemming a charge with "Atlas." |
| 18 | Powell Peteritus, | Lithuanian | Miner, | 45 | M. | 1 | 2 | Marvine, | | Killed by blast near face of chamber while running to safety. |
| March 9 | John Calacan, | Slavonian, .. | Laborer, | 41 | M. | 1 | .... | Marvine, | | Killed by railway cars, while crossing tracks between cars, Outside. |
| 31 | Sylvester Jodeck, | Russian, ... | Footman, | 23 | S. | .... | .... | Eddy Creek, ... | | Killed by falling into shaft while playing. |
| April 14 | Jacob Rozoko, | Polish, | Laborer, | 24 | S. | .... | .... | Johnson, | | Killed by fall of bell roof at face of chamber, while assisting miner to stand prop under it. |
| 22 | John Yabone, | Polish, | Laborer, | 22 | S. | .... | .... | Eddy Creek, .. | | Killed by electricity on manway. He slipped and grabbed hold of an insulated prop. |
| 24 | William Boleski, | Polish, | Miner, | 44 | M. | 1 | 6 | Storrs, | | Killed by cars. He fell while trying to get out of a car that became derailed. Outside. |
| 26 | Joseph Engiltis, | Lithuanian, | Laborer, | 50 | M. | 1 | 4 | Von Storch, ... | | Fatally injured by cars on gangway road. He disturbed the wheel block while throwing on the coal. |
| 28 | Anthony Sheetus, | Lithuanian, | Miner, | 30 | M. | 1 | 3 | West Ridge, .. | | Killed by fall of bell roof at face of chamber. |
| 30 | August Halzman, | Polish, | Laborer, | 27 | S. | .... | .... | Storrs, | | Killed by fall of bell roof at face of chamber. |
| May 1 | John Baconovich, | Russian, ... | Miner, | 37 | M. | 1 | 3 | Johnson, | | Fatally injured by fall of roof at face of chamber while preparing to stand a prop. |

| | | | | | | | | | | | | |
|-------|----|-----------------------|----------------|-----------------|----|----|------|------|------|------|-----------------|---|
| May | 17 | Benjamin Norvich, .. | Polish, | Laborer, | 34 | S. | .... | 1 | .... | 4 | Storrs, | Killed by fall of roof at face of chamber. |
| | 25 | { John Yablonski, .. | Polish, | Miner, | 38 | S. | .... | 1 | .... | 4 | { Eddy Creek. | Killed by fall of bell roof at face of chamber while loading a car. |
| | 28 | { Adam Smith, | Polish, | Laborer, | 38 | M. | .... | 1 | .... | 3 | Von Storch, ... | Killed by blast near face of chamber. |
| | 30 | Joseph Kergenski, .. | Polish, | Miner, | 56 | M. | .... | 1 | .... | 2 | Storrs, | Killed by blast on gangway road while lighting a squib. |
| | 31 | John Shumenski, .. | Polish, | Miner, | 56 | M. | .... | 1 | .... | 2 | Storrs, | Fatally injured by falling under cars on plane while mounting a passing trip. |
| June | 12 | Alfred West, | English, .. | Laborer, | 25 | S. | .... | .... | .... | .... | Von Storch, ... | Fatally injured by fall of bell roof at face of chamber. |
| July | 7 | Michael Kocha, | Lithuanian, .. | Laborer, | 33 | S. | .... | .... | .... | .... | Von Storch, ... | Killed by fall of bell roof at face of chamber. |
| Aug. | 28 | Dominick Galinus, .. | Lithuanian, .. | Miner, | 31 | M. | .... | 1 | .... | 3 | Von Storch, ... | Killed while uncoupling cars in motion, on gangway road. |
| | 31 | Reese Espie, | American, .. | Company man, .. | 28 | M. | .... | 1 | .... | 3 | Von Storch, ... | Killed by fall of bell roof at face of chamber. |
| Sept. | 3 | Thomas Symonds, .. | English, .. | Miner, | 56 | M. | .... | 1 | .... | .... | Eddy Creek, .. | Fatally injured by fall of bell roof at face of chamber. |
| | 15 | Frank Slutskus, | Lithuanian, .. | Laborer, | 22 | S. | .... | .... | .... | .... | Marvine, | Fatally injured by fall of bell roof at face of chamber. |
| | 20 | Stephen Regman, | Hungarian, .. | Miner, | 42 | M. | .... | 1 | .... | 1 | Brislin, | Killed by premature blast at face of chamber. |
| Oct. | 14 | George Ranick, | Polish, | Miner, | 36 | M. | .... | 1 | .... | 4 | Storrs, | Killed by fall of roof at face of chamber while examining after blast. |
| | 23 | William McKenzie, .. | American, .. | Door-tender, .. | 61 | M. | .... | 1 | .... | .... | Von Storch, ... | Fatally injured by derailed car on gangway road. |
| Nov. | 2 | Leopold Fereno, | Italian, | Engineer, | 44 | M. | .... | 1 | .... | 2 | Storrs, | Killed by machinery. While working around the conveyor line his clothes were caught in a pinion. Outside. |
| | 3 | Michael Thompson, .. | American, .. | Laborer, | 32 | M. | .... | 1 | .... | 3 | Legitts Creek, | Killed by blast near face of chamber. A squib that has been placed in the hole was lighted. |
| | 5 | Peter Jamescheck, .. | Slavonian, .. | Company man, .. | 52 | M. | .... | 1 | .... | .... | Johnson, | Killed by fall of roof on gangway road while clearing a fall. |
| | 8 | Frank Buchunnus, .. | Lithuanian, .. | Laborer, | 50 | M. | .... | 1 | .... | 4 | West Ridge, .. | Killed by fall of bell roof in abandoned workings while working on road. |

Lackawanna

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|-----------------------|----------------|----------------|-----|-------------------|-----------------------|------------|---|
| Jan. 13 | Klatisia Dzikus, | Lithuanian, | Laborer, | 22 | S. | Marvine, | Lackawanna | Skull fractured by derailed car on chamber road. |
| 16 | Joseph Garrick, | Polish, | Driver, | 20 | S. | Johnson, | | Leg fractured by cars on gangway road while unloading cars while in motion. |
| 18 | Michael Stunks, | Lithuanian, | Laborer, | 40 | M. | Von Storch, | | Leg fractured by fall of roof while walking on gangway road. |
| 25 | Joseph Franchick, .. | Polish, | Laborer, | 45 | M. | Johnson, .. | | Leg fractured by falling from chute platform while lifting a prop. |
| Feb. 1 | Nicholas Lizro, | American, .. | Driver, | 18 | S. | Storrs, | | Leg squeezed by derailed car on chamber road. |
| 6 | Andrew Krovack, ... | Russian, ... | Driver, | 18 | S. | Eddy Creek, | | Skull fractured by a kick from a mule, while hitching it to a car on gangway road. |
| 15 | Mone Garlza, | Italian, | Driver, | 18 | S. | Eddy Creek, | | Arm fractured by cars on gangway road. |
| 17 | George Froel, | Polish, | Miner, | 34 | M. | Conklin, | | Seriously injured by blast at working place while he and the blower were stemming a charge of Atlas powder. |
| 23 | Frank Bitkus, | Lithuanian, | Laborer, | 29 | S. | Richmond No. 3, | | Leg fractured by derailed car on chamber road. |
| March 27 | Casper Lowe, | Italian, ... | Miner, | 35 | M. | Conklin, | | Body lacerated by cars on gangway road. Face and hands burned by explosion of gas in face of chamber while preparing a blast. |
| 23 | Benjamin Davis, | Welsh, | Miner, | 44 | M. | Storrs, | Lackawanna | Leg fractured by fall of roof at face of chamber while mining out a blast. |
| 25 | John Dombrowski, ... | Polish, | Laborer, | 19 | S. | Storrs, | | Face and hands burned by explosion of powder at face of chamber. |
| April 12 | John Ramigan, | Irish, | Laborer, | 55 | M. | Von Storch, | | Leg fractured by cars on gangway road while opening a door. |
| 22 | Adam Yashenki, | Polish, | Miner, | 24 | M. | Eddy Creek, | | Leg fractured by fall of roof at face of chamber. |
| May 8 | James F. Fadden, ... | American, .. | Miner, | 43 | M. | Eddy Creek, | | Leg fractured by fall of roof in face of chamber while preparing to blast. |
| 10 | Thomas Edwards, | Welsh, | Miner, | 47 | M. | Eddy Creek, | | Rib fractured by blast in face of chamber. |
| 17 | Adam Yamolinis, | Polish, | Miner, | 48 | M. | Storrs, | | Seriously injured by fall of roof at face of working place while loading coal. |

| | | | | | | | |
|-------|----|--------------------------|----------------|-------------------|-------|-------------------------|--|
| May | 18 | William Ripehus, | Lithuanian, .. | Laborer, | 19 M. | Marvane, | Skull fractured by blast near face of chamber. |
| | 28 | George Sherbin, | Lithuanian, .. | Miner, | 26 M. | Richmond No. 3, | Skull fractured by blast at face of chamber while lighting a squib. |
| June | 5 | Andrew Marko, | Russian, ... | Laborer, | 29 M. | Eddy Creek, | Hip dislocated by fall of roof at face of chamber. |
| | 9 | William J. Blackmore, .. | American, .. | Laborer, | 36 M. | Marvine, | Thigh lacerated by an axe while preparing timber in abandoned workings. |
| | 11 | Roger Dora, | Polish, | Miner, | 35 M. | Marvine, | Arm fractured by falling in face of chamber. |
| | 16 | Frank Miscaski, | Polish, | Footman, | 39 M. | Storrs, | Skull fractured by a car casting that fell from breaker tower where he was working. Outside. |
| | 17 | Martin Rudnick, | Polish, | Miner, | 55 M. | Storrs, | Rib fractured by fall of slip roof at face of chamber. |
| | 18 | Michael Pickonite, .. | Italian, | Miner, | 38 M. | Church, | Eyes injured by blast near face of chamber. |
| | | George Sanders, | American, .. | Miner, | 39 M. | Marvine, | Knee dislocated by fall of slip roof at face of chamber. |
| | 22 | Patrick McLaughlin, .. | Irish, | Company man, .. | 58 M. | Legitts Creek, | Arm and leg fractured by plane rope while pulling pulleys. |
| | 23 | Lewis Laverinski, | Lithuanian, .. | Miner, | 26 S. | Von Storch, | Foot and hip fractured by fall of roof at face of chamber. |
| | 35 | David G. Thomas, | American, .. | Footman, | 32 M. | Eddy Creek, | Three fingers fractured while spragging cars at foot of shaft. |
| July | 26 | { Peter Silver, | Polish, | Miner, | 32 M. | { Johnson, | Burned by explosion of gas in face of chamber while loading coal. |
| | 8 | { Frank Silver, | Polish, | Miner, | 38 M. | { Richmond No. 3, | Face and hands burned by explosion of gas at face of chamber while making morning examination. |
| | | { Larry Haswell, | English, ... | Asst. foreman, .. | 50 M. | | Shoulder dislocated by cuts at face of chamber. |
| | 19 | William Van Wert, .. | American, .. | Runner, | 26 M. | Von Storch, | Leg fractured by fall of bell roof at face of chamber. |
| | 20 | Martin Koleska, | Lithuanian, .. | Miner, | 43 M. | Johnson, | Back contused by fall of bell roof at face of chamber. |
| | 26 | John Walsh, | Irish, | Miner, | 29 M. | Storrs, | Leg fractured by rope on plane. |
| | 27 | Lewis M. Thomas, .. | American, .. | Driver, | 17 S. | Legitts Creek, | Two ribs fractured by blast near face of chamber. |
| | | Frank Adamski, | Polish, | Miner, | 39 M. | Von Storch, | Collar bone fractured by derailed car on chamber road. |
| Aug. | 9 | John Drusdack, | Polish, | Miner, | 47 S. | Storrs, | Leg fractured by derailed car on chamber road. |
| | 19 | Daniel Dargis, | Lithuanian, .. | Runner, | 18 S. | Storrs, | Leg fractured by fall of roof on plane road. |
| | 29 | Clarence Cooper, | American, .. | Runner, | 23 S. | Johnson, | Hand crushed by fall of roof at face of chamber. |
| | 27 | William Hill, | English, ... | Miner, | 60 S. | Storrs, | Rib fractured by derailed car on chamber road. |
| Sept. | 9 | Joseph Tootski, | Russian, ... | Runner, | 21 S. | Eddy Creek, | Face and hands burned by explosion of gas in face of heading while making morning examination. |
| | 13 | Joseph Morris, | Welsh, | Asst. foreman, .. | 53 M. | Eddy Creek, | Rib fractured by fall of roof at face of chamber. |
| | 14 | Joseph Petritus, | Lithuanian, .. | Laborer, | 30 M. | Richmond No. 2, | |

Lackawanna

TABLE 5. — Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|---------------------------|----------------|--------------------|-----|-------------------|----------------------|------------|---|
| Sept. 15 | William Hancock, | American, .. | Miner, | 56 | M. | Marvine, | Lackawanna | Finger cut off by hand axe while repairing track on chamber road. |
| Oct. 2 | William Datchevage, | Polish, | Miner, | 35 | M. | Brishin, | | Ankle fractured by being caught in some rock in abandoned workings. |
| 12 | James Elliot, | American, .. | Driver, | 17 | S. | Eddy Creek, | | Arm fractured by cars on gangway road. |
| 20 | Oscar Klein, | American, .. | Brakeman, .. | 18 | S. | Legitts Creek, | | Leg fractured by cars on gangway road. |
| 22 | Michael Petrick, | Russian, .. | Laborer, | 53 | M. | Eddy Creek, | | Rib fractured by fall of slab roof at face of chamber. |
| 25 | Bernard Maleski, | Lithuanian, .. | Door-tender, | 46 | M. | Legitts Creek, | | Ankle fractured by derailed car on gangway road. |
| 28 | Felix Dethlow, | Lithuanian, .. | Miner, | 32 | M. | Legitts Creek, | | Rib fractured by derailed car near face of chamber. |
| Nov. 11 | John Gudalinas, | Lithuanian, .. | Laborer, | 47 | M. | Von Storch, | | Leg fractured by derailed car near face of chamber. |
| 23 | Michael Yanson, | Polish, | Miner, | 27 | M. | Eddy Creek, | | Leg fractured by derailed car on chamber road. |
| 24 | John Zombloski, | Lithuanian, .. | Runner, | 18 | S. | Legitts Creek, | | Arm fractured by falling while crossing plane track. |
| 26 | John Fringie, | English, ... | Door-tender, | 65 | M. | Marvine, | | Arm fractured by derailed car on chamber road. |
| Dec. 3 | Dominic Pac, | Italian, | Runner, | 28 | S. | Church, | | Leg fractured by derailed car on gangway road. |
| 7 | Stephen Matice, | Hungarian, .. | Brakeman, | 19 | S. | Brishin, | | Leg fractured by fall of slab roof near face of chamber. |
| 22 | Andrew Sonenski, | Polish, | Miner, | 40 | M. | Storrs, | | |

CONDITION OF COLLIERIES

DELAWARE AND HUDSON COMPANY

Eddy Creek and Marvine Collieries.—Ventilation, roads, drainage and condition as to safety, good.

Von Storch and Legitts Collieries.—Ventilation, roads and drainage, fair. Condition as to safety, good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Storrs and Brisbin Collieries.—Ventilation, roads, drainage and condition as to safety, good.

Cayuga Colliery.—Ventilation and condition as to safety, good. Roads and drainage, fair.

SCRANTON COAL COMPANY

Johnson and Richmond No. 3 Collieries.—Ventilation, roads, drainage and condition as to safety, good.

West Ridge Colliery.—Ventilation, roads and drainage, fair. Condition as to safety, good.

BULLS HEAD COAL COMPANY

Church Colliery.—Ventilation, roads and drainage, fair. Condition as to safety, good.

CLEARVIEW COAL COMPANY

Conklin Colliery.—Ventilation, roads and drainage, fair. Condition as to safety, good.

IMPROVEMENTS

DELAWARE AND HUDSON COMPANY

Eddy Creek Colliery.—Completed the rock slope through the fault and started tunnel through Smoketown, Diamond vein. Installed a Goodman mining machine in the Dunmore vein. Drove rock slope to Rock and 14 foot veins in Bidseye drift.

Marvine Colliery.—The mouth of No. 1 rock slope was concreted. Rock vein was opened from No. 1 slope and also from No. 9 rock plane.

Von Storch Colliery.—A rock plane 400 feet long was driven from the Clark to the New County vein.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Storrs Colliery.—Built a fireproof machine shop. A bore hole was made for suspending a cable at No. 3 shaft. Built a new washery. A tunnel was driven from top to bottom split of 14 foot vein, at No. 2 shaft. New transmission line from Hampton power plant. One shortwall coal-cutting machine was installed.

Cayuga Colliery.—Installed one 7-ton electric locomotive with reel attachment; also one shortwall coal-cutting machine. Made second opening to New County vein. Installed electric hoist at No. 6 plane, Clark vein.

Brisbin Colliery.—Installed one longwall coal-cutting machine.

BULLS HEAD COAL COMPANY

Church Colliery.—Installed one 75-horse power Western Electric mine hoist, one 75 K. W. 112 H. P. motor generator set, and one Morgan-Gardner coal-cutting machine.

CLEARVIEW COAL COMPANY

Conklin Colliery.—A hoisting tower was built to cross the D., L. and W. track and load the coal from mine to railroad cars. The coal is taken to the Peoples Coal Company for preparation.

THIRD DISTRICT

LACKAWANNA COUNTY

Scranton, Pa., February 20, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the Third Anthracite District for the year ending December 31, 1915, as required by the Act of April 14, 1903.

Respectfully submitted,

S. J. PHILLIPS,
Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 13 |
| Number of mines, | 25 |
| Number of mines in operation, | 25 |
| Number of tons of coal shipped to market, | 3,089,224 |
| Number of tons used at mines for steam and heat, | 327,977 |
| Number of tons sold to local trade and used by employes, | 57,720 |
| Number of tons produced, | 3,474,921 |
| Number of tons produced by compressed air machines, ..... | ..... |
| Number of tons produced by electrical machines, | 115,000 |
| Number of persons employed inside of mines, | 5,991 |
| Number of persons employed outside, | 1,678 |
| Number of fatal accidents inside of mines, | 24 |
| Number of fatal accidents outside, | 2 |
| Number of non-fatal accidents inside of mines, | 52 |
| Number of non-fatal accidents outside, | 7 |
| Number of tons of coal produced per fatal accident inside, | 144,788 |
| Number of tons produced per fatal accident outside, .. | 1,737,461 |
| Number of tons produced per fatal accident inside and outside, | 133,651 |
| Number of persons employed per fatal accident inside, .. | 250 |
| Number of persons employed per fatal accident outside, .. | 839 |
| Number of persons employed per fatal accident inside and outside, | 295 |
| Number of persons employed per non-fatal accident inside, | 115 |
| Number of persons employed per non-fatal accident outside, | 240 |
| Number of persons employed per non-fatal accident inside and outside, | 130 |
| Number of wives made widows, | 16 |
| Number of children made orphans, | 43 |
| Number of steam locomotives used inside of mines, ..... | ..... |
| Number of steam locomotives used outside, | 5 |
| Number of compressed air locomotives used inside, ..... | ..... |
| Number of compressed air locomotives used outside, .. | ..... |
| Number of electric motors used inside, | 59 |
| Number of electric motors used outside, | 4 |
| Number of gasoline locomotives used inside, ..... | ..... |
| Number of fans in use, | 20 |
| Number of furnaces in use, | 1 |
| Number of gaseous mines in operation, | 11 |
| Number of non-gaseous mines in operation, | 14 |
| Number of new mines opened, | 1 |
| Number of old mines abandoned, ..... | ..... |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|---|------------------|
| Pennsylvania Coal Company, | 1,456,749 |
| Delaware, Lackawanna and Western Railroad Company (Including Hudson Coal Company), | 585,161 |
| Scranton Coal Company, | 564,288 |
| Price-Pancoast Coal Company, | 508,670 |
| Economy Light, Heat and Power Company, | 101,174 |
| Nay Aug Coal Company, | 84,692 |
| Spencer Coal Company, | 72,871 |
| Green Ridge Coal Company, | 63,352 |
| Carney and Brown Coal Company, | 28,507 |
| No. 6 Coal Company, | 9,457 |
| Total, | 3,474,921 |

Production by Counties

| | |
|-------------------|-----------|
| Lackawanna, | 3,474,921 |
|-------------------|-----------|

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|---|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| Pennsylvania Coal Co., | 7 | ..... | 7 | 11 | 1 | 12 | 298,107 | 132,432 | 2,032 | 677 | 2,769 | 290 | ..... | 185 | 677 |
| Delaware, Lackawanna and Western Railroad Co. (Including Hudson Coal Co.), .. | 3 | 1 | 4 | 5 | 1 | 6 | 195,054 | 117,032 | 1,239 | 298 | 1,537 | 413 | 298 | 248 | 298 |
| Scranton Coal Co., | 8 | 1 | 9 | 13 | 3 | 16 | 70,533 | 43,497 | 1,078 | 260 | 1,337 | 135 | 260 | 91 | 260 |
| Price-Panocoast Coal Co., | 1 | ..... | 1 | 9 | 1 | 10 | 508,676 | 56,519 | 1,130 | 237 | 1,367 | 1,130 | ..... | 126 | 237 |
| Say Aug Coal Co., | 1 | ..... | 1 | 19 | 1 | 20 | 84,682 | 9,410 | 167 | 33 | 200 | 167 | ..... | 19 | 33 |
| Spencer Coal Co., | 3 | ..... | 3 | 2 | ..... | 2 | 24,290 | 36,436 | 145 | 55 | 200 | 48 | ..... | 73 | 55 |
| Green Ridge Coal Co., | 1 | ..... | 1 | 2 | ..... | 2 | ..... | 31,076 | 120 | 62 | 132 | ..... | ..... | 60 | 62 |
| N. Y. Coal Co., ..... | ..... | ..... | ..... | 1 | ..... | 1 | 9,437 | 9,437 | 24 | 9 | 33 | 24 | ..... | 24 | 9 |
| Miscellaneous Companies, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 56 | 47 | 103 | ..... | ..... | ..... | ..... |
| Totals and averages, | 24 | 2 | 26 | 52 | 7 | 59 | 141,788 | 66,822 | 5,991 | 1,678 | 7,669 | 250 | 839 | 115 | 210 |

Names of Operators

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | | |
|---|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | Totals | Percentages |
| Inside | | | | | | | | | | | | | | |
| Falls of roof, | | 1 | 1 | ..... | 1 | ..... | 2 | ..... | 1 | 5 | 1 | ..... | 12 | 50.00 |
| Mine cars, | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 8 | 8.33 |
| Explosions of gas, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 4.17 |
| Explosions of powder and dynamite, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4.17 |
| Blasts, premature and otherwise, | 1 | ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | 3 | ..... | ..... | 6 | 25.00 |
| Falling into shafts, .. | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 | 4.16 |
| Struck by rock, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4.17 |
| Totals, | 3 | 2 | 2 | ..... | 1 | ..... | 4 | 1 | 1 | 8 | 1 | 1 | 24 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 50.00 |
| Machinery, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 50.00 |
| Totals, ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 100.00 |
| Grand totals inside and outside | 3 | 2 | 3 | ..... | 2 | ..... | 4 | 1 | 1 | 8 | 1 | 1 | 26 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ..... | 1 | 3 | 5.77 |
| Falls of slate, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1.92 |
| Falls of roof, ..... | ..... | 3 | ..... | ..... | ..... | 1 | 1 | 2 | 1 | 3 | 1 | 4 | 18 | 34.62 |
| Mine cars, | 1 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ..... | 8 | 15.38 |
| Explosions of gas, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4 | 4 | 7.69 |
| Explosions of powder and dynamite, | 2 | ..... | ..... | ..... | 2 | 1 | ..... | ..... | 1 | ..... | ..... | ..... | 6 | 11.54 |
| Blasts, premature and otherwise, ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... | 1 | 1 | ..... | 1 | 5 | 9.62 |
| Mules, ..... | ..... | ..... | ..... | 1 | 1 | 1 | 1 | ..... | ..... | ..... | ..... | ..... | 3 | 5.77 |
| Machinery, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2 | 3.85 |
| Struck by piece of ice, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1.92 |
| Struck by piece of rock, ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1.92 |
| Totals, | 3 | 5 | 1 | 7 | 3 | 4 | 2 | 2 | 3 | 6 | 3 | 13 | 52 | 109.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | 1 | 3 | 42.86 |
| Machinery, ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 28.57 |
| Struck by rail, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 14.28 |
| Struck by rock, ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 14.28 |
| Totals, ..... | ..... | 1 | ..... | 1 | 1 | 1 | 1 | ..... | ..... | ..... | 1 | 1 | 7 | 100.00 |
| Grand totals inside and outside, | 3 | 6 | 1 | 8 | 4 | 5 | 3 | 2 | 3 | 6 | 4 | 14 | 59 | ..... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| Inside | | | | | | | | | | | | |
| Miners, | 1 | ..... | 2 | ..... | 1 | ..... | 2 | 1 | 1 | 2 | ..... | 14 |
| Miners' laborers, | 2 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 3 |
| Company men, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... |
| Totals, | 3 | ..... | 2 | ..... | 1 | ..... | 4 | 1 | 1 | 2 | 1 | 24 |
| Outside | | | | | | | | | | | | |
| Jig runners, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Runners, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| Grand totals inside and outside, | 3 | 2 | 3 | ..... | 2 | ..... | 4 | 1 | 1 | 2 | 1 | 26 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| Inside | | | | | | | | | | | | |
| Assistant mine foremen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 |
| Miners, | 1 | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | 2 |
| Miners' laborers, | 1 | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | 1 | 2 |
| Drivers and runners, | 1 | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | ..... | 5 |
| Footmen, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Headmen, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Company men, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 |
| Rockmen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 |
| Chargemen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 |
| Engineers, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 |
| Totals, | 3 | 5 | 1 | 7 | 2 | 4 | 2 | 2 | 3 | 6 | 3 | 52 |
| Outside | | | | | | | | | | | | |
| Car repairers, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Engineers and firemen, ..... | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Laborers, ..... | ..... | 1 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 2 |
| Drivers, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 |
| Runners, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 |
| Totals, ..... | ..... | 1 | ..... | 1 | 1 | 1 | 1 | ..... | ..... | ..... | 1 | 7 |
| Grand totals inside and outside, | 3 | 6 | 1 | 8 | 4 | 5 | 3 | 2 | 3 | 6 | 4 | 59 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| American, | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | 2 |
| English, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 |
| Irish, | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | 6 |
| Polish, | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | 1 | 4 |
| Italian, | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | 4 |
| Slavonian, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Lithuanian, | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Austrian, | 2 | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 4 |
| Russian, | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | 3 |
| Totals, | 3 | 2 | 2 | ... | 2 | ... | 4 | 1 | 1 | 2 | 1 | 26 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| American, | ... | ... | ... | 1 | 2 | ... | 1 | ... | ... | ... | 3 | 7 |
| Welsh, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 |
| Irish, | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | 2 |
| German, | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | 2 |
| Polish, | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 13 |
| Italian, | 1 | 2 | ... | 1 | ... | 1 | ... | 1 | 1 | 1 | ... | 13 |
| Slavonian, | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 2 |
| Lithuanian, | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Austrian, | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Russian, | 2 | 2 | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | 9 |
| Totals, | 3 | 6 | 1 | 8 | 4 | 5 | 3 | 2 | 3 | 6 | 4 | 59 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Area of furnace bars in square feet | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|---|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|----------------|------------------|-------------------------------------|----------------------------------|---|--|--|-----------------------------------|
| | | | | | | | | | | | | | | | | |
| Pennsylvania Coal Co. | | | | | | | | | | | | | | | | |
| Hery: | | | | | | | | | | | | | | | | |
| Pennsylvania No. 1, | Shaft, | Gaseous, ... | 2 Fans, { | 20.0 | 6.6 | 5.5 | 70 | 1.5 | Gubal, ... | Steam, | ... | 16 | 149,815 | 133,750 | 157,055 | 303 |
| Gibbs Grove, | Shaft, | Non-gas, ... | { Fan, .. | 17.8 | 5.0 | 5.3 | 70 | 1.2 | Gubal, ... | Steam, | ... | 1 | 10,000 | 9,500 | 10,500 | 40 |
| Pennsylvania No. 2, | Drift, | Non-gas, ... | { Fan, .. | 18.0 | 5.0 | 4.5 | 70 | 1.0 | Gubal, ... | Steam, | ... | 8 | 95,200 | 80,500 | 106,700 | 211 |
| Clark, | Slope, | Non-gas, ... | { Fan, .. | 17.8 | 5.0 | 5.3 | 60 | 1.3 | Gubal, ... | Steam, | ... | 3 | 18,700 | 18,000 | 19,400 | 58 |
| Marcy, | Slope, | Non-gas, ... | { Fan, .. | 7.9 | 1.5 | 3.8 | 250 | 1.3 | Propeller, ... | Electricity, ... | ... | 3 | 25,500 | 25,000 | 27,900 | 73 |
| Pennsylvania No. 5 Colliery: | | | | | | | | | | | | | | | | |
| Pennsylvania No. 5, | Shaft, | Gaseous, ... | 2 Fans, { | 20.0 | 6.6 | 5.5 | 75 | 1.5 | Gubal, ... | Steam, | ... | 7 | 92,140 | 72,200 | 108,400 | 232 |
| Underwood, | Shaft, | Gaseous, ... | 2 Fans, { | 17.8 | 5.0 | 5.3 | 45 | .4 | Gubal, ... | Electricity, ... | ... | ... | ... | ... | ... | ... |
| Underwood Colliery: | | | | | | | | | | | | | | | | |
| Underwood, | Shaft, | Gaseous, ... | 2 Fans, .. | 14.0 | 6.0 | 4.6 | 60 | 1.5 | Jeffrey, ... | Steam, | ... | 4 | 80,000 | 71,250 | 81,050 | 207 |
| Delaware, Lackawanna and Western Railroad Co. (Including Hudson Coal Co.) | | | | | | | | | | | | | | | | |
| Diamond No. 2, | Shaft, | Gaseous, ... | Fan, | 14.0 | 4.0 | 4.0 | 90 | 1.5 | Gubal, ... | Steam, | ... | 6 | 123,200 | 10,500 | 154,900 | 350 |
| Diamond, | Drift, | Non-gas, ... | { Fan, .. | 14.0 | 4.0 | 4.0 | 90 | 1.5 | Gubal, ... | Steam, | ... | ... | 48,460 | 45,035 | 52,380 | 189 |
| Diamond, Tripp, | Shaft, | Gaseous, ... | { Fan, .. | 15.6 | 7.0 | 1.6 | 88 | 1.8 | Jeffrey, ... | Steam, | ... | ... | 146,480 | 123,401 | 180,320 | 428 |
| Diamond Tripp, | Slope, | Non-gas, ... | { Fan, .. | ... | ... | 3.0 | ... | ... | ... | ... | ... | ... | 51,500 | 33,200 | 61,840 | 46 |

| | | | | | | | | | | | | | | | |
|----------------------------|-------------|-------------|-------------|------|-----|-----|-----|-----|--------------|-------------|----|---------|---------|---------|------|
| Manville Colliery: | Shaft, | Gaseous, .. | Fan, | 20.0 | 5.0 | 5.0 | 68 | .9 | Guibal, ... | Steam, | 5 | 170,310 | 100,140 | 175,370 | 181 |
| Manville, | | | | | | | | | | | | | | | |
| Scranton Coal Co. | | | | | | | | | | | | | | | |
| Pine Brook Colliery: | Shaft, | Gaseous, .. | Fan, | 17.6 | 5.0 | 6.0 | 102 | 1.2 | Guibal, ... | Steam, | 13 | 205,250 | 190,000 | 250,000 | 803 |
| Mount Pleasant Colliery: | | | | | | | | | | | | | | | |
| Mount Pleasant (Main), | Shaft, | Gaseous, .. | Fan, | 20.0 | 5.6 | 6.9 | 60 | .7 | Guibal, ... | Steam, | 7 | 103,400 | 100,000 | 170,000 | 330 |
| Mount Pleasant (Surface) | Shaft, | Gaseous, .. | Fan, | 12.9 | 3.2 | 3.5 | 80 | .6 | Guibal, ... | Steam, | 7 | 85,500 | 81,000 | 148,250 | 350 |
| Price-Panocast Coal Co. | | | | | | | | | | | | | | | |
| Panocast Colliery: | Shaft, | Gaseous, .. | 3 Fans, { | 20.0 | 6.0 | 5.6 | 70 | 1.2 | Guibal, ... | Steam, | 32 | 386,739 | 351,475 | 398,070 | 1130 |
| Panocast, | | | | 20.0 | 6.0 | 5.6 | 90 | 2.5 | Guibal, ... | Steam, | | | | | |
| | | | | 20.0 | 7.0 | 3.0 | 100 | 4.1 | Jeffrey, ... | Steam, | | | | | |
| Nay Aug Coal Co. | | | | | | | | | | | | | | | |
| Nay Aug Colliery: | | | | | | | | | | | | | | | |
| Nay Aug No. 1, | Slope, | Non-gas, .. | Natural, .. | | | | | | | | 1 | 26,600 | 24,300 | 28,200 | 72 |
| Nay Aug, | Drift, | Non-gas, .. | Natural, .. | | | | | | | | 1 | 23,300 | 21,400 | 25,300 | 55 |
| Nay Aug No. 3, | | Non-gas, .. | Natural, .. | | | | | | | | 1 | 17,650 | 15,900 | 18,900 | 40 |
| Spencer Coal Co. | | | | | | | | | | | | | | | |
| Spencer Colliery: | | | | | | | | | | | | | | | |
| Spencer No. 1, | Shaft, | Non-gas, .. | Natural, .. | | | | | | | | 5 | 30,000 | 25,000 | 36,800 | 95 |
| Spencer No. 2, | Shaft, | Non-gas, .. | Natural, .. | | | | | | | | 3 | 18,000 | 14,200 | 22,500 | 50 |
| Green Ridge Coal Co. | | | | | | | | | | | | | | | |
| Green Ridge Colliery: | Slope, | Gaseous, .. | Fan, | 16.0 | 5.0 | 4.6 | 48 | 2.5 | Guibal, ... | Steam, | 9 | 90,540 | 71,720 | 108,750 | 120 |
| Green Ridge, | | | | | | | | | | | | | | | |
| Carney and Brown Coal Co. | Slope, | Non-gas, .. | Furnace, .. | | | | | | | | 32 | 13,291 | 13,396 | 13,396 | 56 |
| Carney and Brown Colliery: | | | | | | | | | | | | | | | |
| Carney and Brown, | | | | | | | | | | | | | | | |
| No. 6 Coal Co. | | | | | | | | | | | | | | | |
| No. 6 Colliery: | Slope, | Non-gas, .. | Natural, .. | | | | | | | | 1 | 7,100 | 7,100 | 7,600 | 20 |
| No. 6, | Drift, | Non-gas, .. | Natural, .. | | | | | | | | 1 | 4,600 | 4,600 | 4,800 | 4 |
| No. 6,* | | | | | | | | | | | | | | | |

*New mine.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|---|-----------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Pennsylvania Coal Co. | | | | | | | | | | | | | |
| Pennsylvania No. 1, | Lackawanna, { | 800,259 | 27,897 | 2,415 | 830,481 | 265 | 1,531 | 2 | 2 | 882,500 | ..... | 22,000 | 71 |
| Pennsylvania No. 5, | | 294,008 | 10,725 | 8,069 | 312,753 | 267 | 617 | 1 | 3 | 292,500 | ..... | 14,300 | 37 |
| Underwood, | | 277,686 | 35,402 | 427 | 313,515 | 265 | 501 | 4 | 7 | 291,550 | 49,750 | 37,500 | 5 |
| Totals, | | 1,371,953 | 73,945 | 10,851 | 1,456,749 | ..... | 2,709 | 7 | 12 | 1,376,550 | 49,750 | 74,400 | 113 |
| Delaware, Lackawanna and Western Railroad Co. (Including Hudson Coal Co.) | | | | | | | | | | | | | |
| Diamond, | Lackawanna, { | 484,840 | ..... | ..... | 484,840 | 265 | 1,279 | 1 | 4 | 647,525 | 66,762 | ..... | 143 |
| Manville, | | 70,064 | 21,588 | 1,414 | 93,066 | 198 | 243 | 2 | 2 | 68,725 | 1,238 | ..... | 36 |
| Diamond Washery, | Lackawanna, ... | 554,004 | 21,588 | 1,414 | 577,906 | ..... | 1,522 | 3 | 6 | 716,250 | 68,000 | ..... | 179 |
| Totals, | | 4,927 | 2,328 | ..... | 7,255 | 272 | 15 | 1 | ..... | ..... | ..... | ..... | 2 |
| | | 559,831 | 23,916 | 1,414 | 585,161 | ..... | 1,537 | 4 | 6 | 716,250 | 68,000 | ..... | 181 |
| Scranton Coal Co. | | | | | | | | | | | | | |
| Pine Brook, | Lackawanna, { | 407,299 | 37,000 | 5,153 | 445,452 | 183 | 996 | 6 | 4 | 658,750 | 15,200 | ..... | 117 |
| Mount Pleasant, | | 96,936 | 20,275 | 1,625 | 118,836 | 137 | 342 | 3 | 13 | 135,700 | 4,200 | ..... | 50 |
| Totals, | | 504,235 | 57,275 | 6,778 | 564,288 | ..... | 1,338 | 9 | 16 | 804,450 | 19,500 | ..... | 167 |
| Price-Pancoat Coal Co. | | | | | | | | | | | | | |
| Pancoat, | Lackawanna, ... | 445,751 | 58,400 | 4,519 | 508,670 | 224 | 1,367 | 1 | 10 | 688,225 | 15,450 | 703,775 | 115 |

TABLE 2.—Continued

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|-----------------------------------|----------------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Economy Light, Heat and Power Co. | Lackawanna, ... | ..... | 101,174 | ..... | 101,174 | 249 | 10 | ..... | ..... | ..... | ..... | ..... | ..... |
| Economy Washery, | Lackawanna, ... | 80,896 | 3,796 | ..... | 84,692 | 304 | 200 | 1 | 10 | 13,275 | 10,830 | ..... | 27 |
| Nay Aug, | Nay Aug Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Spencer, | Spencer Coal Co. | 55,313 | 8,500 | 9,058 | 72,871 | 223 | 200 | 2 | 2 | 30,000 | 9,600 | ..... | 20 |
| Green Ridge, | Green Ridge Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Carney and Brown Coal Co. | Lackawanna, ... | 41,538 | 4,889 | 13,925 | 63,352 | 135 | 182 | ..... | 2 | 44,225 | 2,300 | ..... | 23 |
| Carney and Brown, | Lackawanna, ... | 29,772 | 70 | 5,665 | 28,507 | 176 | 93 | ..... | ..... | 30,000 | 3,650 | ..... | 17 |
| No. 6, | No. 6 Coal Co. | ..... | ..... | 5,510 | 9,457 | 206 | 33 | 1 | ..... | ..... | ..... | 2,100 | 7 |
| Grand totals, ..... | ..... | 3,089,224 | 327,977 | 57,720 | 3,474,921 | ..... | 7,669 | 26 | 59 | 3,702,975 | 179,180 | 780,275 | 689 |

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | Locomotives | | | | Total horse power | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors | |
|--|-------------|-------------------|-------------|---------|-------------|-------------|-------|-------|----------|-------------------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|-------|
| | | Cylindrical | Horse power | Tubular | Horse power | Gasoline | Steam | Air | Electric | | | | | | | | | |
| Pennsylvania Coal Co., | | | | 32 | 5,390 | 5,390 | ..... | ..... | ..... | 41 | 60 | 4,950 | 9 | 6,650 | 3,000 | ..... | 10 | 1 |
| Delaware, Lackawanna and Western, Railroad Co. (including Hudson Coal Co.), .. | Lackawanna. | ..... | ..... | 13 | 2,923 | 2,923 | ..... | ..... | ..... | 5 | 36 | 2,811 | 17 | 7,723 | 6,898 | ..... | ..... | ..... |
| Seranton Coal Co., | | | | 12 | 2,125 | 2,485 | ..... | ..... | ..... | 8 | 29 | 2,358 | ..... | 5,980 | 2,900 | ..... | 3 | ..... |
| Price-Puncoast Coal Co., | | | | 8 | 2,300 | 2,300 | ..... | 1 | ..... | ..... | 24 | 1,693 | ..... | 4,000 | 2,500 | ..... | ..... | ..... |
| Nay Aug Coal Co., | | | | 3 | 240 | 240 | ..... | ..... | ..... | ..... | 4 | 150 | ..... | ..... | ..... | ..... | ..... | ..... |
| Spencer Coal Co., | | | | 2 | 250 | 425 | ..... | ..... | ..... | 6 | 6 | 370 | ..... | ..... | ..... | ..... | ..... | ..... |
| Green Ridge Coal Co., | | | | 6 | 750 | 750 | ..... | ..... | ..... | 3 | 8 | 594 | ..... | ..... | ..... | ..... | ..... | ..... |
| Carmey and Brown Coal Co., .. | | | | 3 | 360 | 360 | ..... | ..... | ..... | ..... | 4 | 115 | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, | | 17 | 14,258 | 79 | 14,793 | 14,793 | ..... | 8 | ..... | 63 | 171 | 13,071 | 36 | 24,307 | 16,298 | ..... | 15 | 6 |

TABLE 3.—Number of each class of employees inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | Outside | | | | | | | | Grand total | |
|--|-------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|---------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|---------------------|---------------|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employees | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | Bookkeepers and clerks | All other employees | Total outside |
| Pennsylvania Coal Co., | Lackawanna, | 5 | 16 | 1 | 670 | 697 | 90 | 34 | 13 | 253 | 2,032 | 2 | 3 | 51 | 41 | 178 | 31 | 4 | 367 | 677 | 2,709 |
| Delaware, Lackawanna and Western Railroad (Including Hudson Coal Co.), | | 4 | 3 | 9 | 398 | 475 | 151 | 34 | 10 | 158 | 1,239 | 1 | 4 | 15 | 39 | 60 | 14 | 7 | 158 | 298 | 1,537 |
| Seranton Coal Co., | | 2 | 3 | 8 | 352 | 311 | 211 | 42 | 9 | 140 | 1,078 | ... | 2 | 16 | 30 | 30 | 18 | 2 | 107 | 260 | 1,338 |
| Price-Pancoast Coal Co., | | 3 | 2 | 9 | 311 | 348 | 180 | 70 | 7 | 69 | 1,130 | 1 | 1 | 6 | 22 | 70 | 41 | 5 | 91 | 237 | 1,367 |
| Economy Light, Heat and Power Co., | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | 9 | 10 |
| Navy Aug. Coal Co., | | 1 | 2 | ... | 68 | 70 | 19 | ... | ... | 3 | 4 | 167 | 1 | 1 | 3 | 1 | 3 | 1 | ... | 2 | 22 |
| Spencer Coal Co., | | 1 | 1 | ... | 52 | 57 | 12 | ... | ... | 2 | 20 | 145 | 1 | 1 | 3 | 9 | ... | ... | 2 | 39 | 55 |
| Green Ridge Coal Co., | | 1 | ... | 1 | 44 | 48 | 13 | ... | 2 | 3 | 8 | 120 | 1 | 1 | 7 | 7 | 17 | ... | 2 | 27 | 62 |
| Carney and Brown Coal Co., | | 1 | 2 | ... | 16 | 16 | 8 | ... | ... | 6 | 7 | 56 | 1 | 1 | 2 | 4 | 4 | ... | 1 | 16 | 37 |
| No. 6 Coal Co., | | 1 | ... | ... | 10 | 10 | 3 | ... | ... | ... | ... | 24 | ... | 1 | ... | ... | 3 | ... | 1 | 4 | 9 |
| Totals, | | 19 | 26 | 28 | 1,921 | 2,032 | 637 | 180 | 41 | 494 | 5,991 | 8 | 16 | 102 | 153 | 428 | 105 | 26 | 840 | 1,678 | 7,669 |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|-----------------------|----------------|-----------------|-----|-------------------|------------------|-------------------|------------------------|------------|--|
| Jan. 19 | Alcock Yimnick, | Austrian, .. | Laborer, | 21 | S. | .... | .... | Underwood, .. | Lackawanna | Killed by mine cars at face of slope. |
| 20 | John Liza, | Austrian, .. | Laborer, | 35 | M. | 1 | 9 | Mount Pleasant, .. | | Fatally injured by premature blast at face. Died a few hours later at hospital. |
| 26 | Anthony Yemey, | Italian, | Miner, | 36 | M. | 1 | 1 | Mount Pleasant, .. | | Killed by fall of roof 8 feet from face. |
| Feb. 1 | Mike Howish, | Austrian, .. | Laborer, | 50 | M. | 1 | 2 | Pine Brook, .. | | Fatally injured by slide of bottom rock at face. Died a few hours later at hospital. |
| 18 | Wash Lesko, | Russian, | Laborer, | 35 | M. | 1 | 4 | Underwood, .. | | Killed by fall of roof while "robbing pillars." |
| March 4 | Alex. Luscavage, | Polish, | Miner, | 24 | S. | .... | .... | Pennsylvania No. 1, .. | | Fatally injured by explosion of powder about 100 feet from face. Died March 10. |
| 8 | Adam Stanis, | Polish, | Miner, | 36 | S. | .... | .... | Pine Brook, .. | | Killed by machinery 23 feet from his regular place. Outside. |
| 31 | David Mochan, | Irish, | Jig-runner, .. | 26 | M. | 1 | 1 | Diamond Washery, | | Fatally injured by fall of roof at face. Died a few hours later at hospital. |
| May 13 | Daniel Keoghier, ... | Irish, | Miner, | 45 | M. | 1 | 4 | Marville, | | Fatally injured by fall of roof at face. Died a few hours later at hospital. |
| 28 | John Gross, | Austrian, .. | Runner, | 40 | M. | 1 | 2 | Pine Brook, .. | | Fatally injured by roof. Died shortly afterwards at hospital. Outside. |
| July 3 | Joe. Sokolofsky, | Russian, | Laborer, | 20 | S. | .... | .... | Pancoast, | Lackawanna | Killed by piece of falling rock about middle of vein in pillar place. |
| 17 | John Madden, | American, .. | Company man, .. | 30 | S. | .... | .... | Mount Pleasant, .. | | Fatally injured by falling down shaft. Died July 21. |
| 24 | Joe. Andrascavage, .. | Polish, | Miner, | 32 | M. | 1 | 1 | Pennsylvania No. 1, .. | | Killed by fall of roof in pillar place. |
| 28 | Frank Martin, | Polish, | Miner, | 57 | M. | 1 | 3 | Pine Brook, .. | | Killed by premature blast 15 feet from face. |
| Aug. 17 | John Sukus, | Lithuanian, .. | Miner, | 51 | M. | 1 | .... | Marville, | | Fatally injured by premature blast 10 feet from face. |
| Sept. 10 | Louis Cinga, | Italian, | Miner, | 30 | M. | 1 | .... | Nay Aug, | | Fatally injured by fall of roof in pillar place. Died a few hours later in hospital. |
| Oct. 4 | Adam Plonecavage, ... | Russian, | Miner, | 40 | M. | 1 | 6 | Diamond, | | Killed by delayed blast at face. |
| 6 | Samuel Nollig, | American, .. | Laborer, | 38 | S. | .... | .... | Mount Pleasant, .. | | Killed by fall of roof at face. |
| 8 | Peter Gurst, | Italian, | Miner, | 26 | S. | .... | .... | Mount Pleasant, .. | | Killed by fall of roof in pillar place. |

| | | | | | | | | | | | |
|-------|----|-----------------------|----------------|--------------------|----|----|-----|-----|----------------|------------|--|
| O. T. | 12 | Michael Sullivan, .. | Irish, | Miner, | 52 | M. | 1 | 2 | Spencer, ... | Lackawanna | Killed by fall of roof in pillar place. |
| | 13 | Martin Curley, | Irish, | Laborer, | 40 | S. | 1 | 1 | Pennsylvania | | |
| | | Alex. Ling, | Slavonian, .. | Laborer, | 22 | M. | 1 | 1 | No. 5. | | Fatally injured by fall of roof 16 feet from face. Died at hospital October 17. |
| | | Thomas Collins, | Irish, | Miner, | 48 | M. | 1 | 6 | Pine Brook, | | Fatally injured by premature blast 12 feet from face. Died at hospital October 21. |
| | | Thomas Coop, | English, ... | Miner, | 36 | M. | 1 | 1 | Pine Brook, | | Killed by premature blast at face. |
| Nov. | 30 | Anthony Dougherty, .. | Irish, | Company man, | 45 | S. | ... | ... | Spencer, | | Killed by fall of roof on main road. |
| Dec. | 3 | James Minozzi, | Italian, | Miner, | 24 | S. | ... | ... | Underwood, ... | | Killed by explosion of gas on main road. |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|-------------------------|-------------------|---------------------|-----|-------------------|-------------------------|------------|---|
| Jan. 4 | { Mike Stisenavage, .. | Russian, | Miner, | 19 | M. | { Parcoast, | Lackawanna | { Arms slightly burned by powder at face. |
| | { Walter Wanabe, .. | Russian, | Laborer, | 24 | S. | .. | | { Arms and face slightly burned. |
| Feb. 30 | Dimmick Manche, .. | Italian, | Driver, | 25 | S. | Nay Aug, | | Leg broken by mine cars on main road. |
| | Joseph Azzarelli, .. | Italian, | Miner, | 33 | M. | Nay Aug, | | Body bruised by fall of roof on main road. |
| 8 | Sam. Gredni, | Italian, | Miner, | 24 | M. | Mount Pleasant, | | Arm broken by fall of roof at face. |
| 9 | Mike Gredosh, | Russian, | Laborer, | 30 | M. | Green Ridge, | | Leg crushed by piece of bottom rock few feet from face. |
| 18 | Alex. Chaslusk, | Russian, | Laborer, | 27 | S. | Underwood, | | Internally injured while loading rails. |
| 27 | Andrew Swansey, | Russian, | Laborer, | 56 | M. | Parcoast, | | Foot fractured by mine cars on main road. |
| March 16 | Walter Teisensky, .. | Polish, | Laborer, | 28 | S. | Mount Pleasant, | | Adown shaft. |
| | John McHale, | Irish, | Footman, | 45 | M. | Mount Pleasant, | | Leg broken by fall of roof at face. |
| April 2 | Henry Acker, | German, | Miner, | 64 | M. | No. 6, | | Leg fractured by tying coal from delayed blast at face. |
| | Vitis Wangfitts, | Lithuanian, | Miner, | 46 | M. | Diamond, | | Leg fractured by flying coal from premature blast 30 feet from face. |
| 3 | Ed. Colchuk, | Russian, | Miner, | 22 | S. | Diamond, | | Leg fractured by fall of roof at face. |
| 6 | Joseph Capes, | Italian, | Laborer, | 20 | S. | Pennsylvania No. 1, .. | | Leg fractured by mine cars 25 feet from face. |
| 11 | Thomas Calpin, | Irish, | Laborer, | 52 | M. | Pine Brook, | | Arm broken by conveyor line a few feet from face. |
| 20 | John Borasky, | Lithuanian, | Laborer, | 25 | S. | Underwood, | | Back sprained by lifting mine car on main road cut. |
| 29 | John Rusick, | American, | Headman, | 20 | S. | Mount Pleasant, | | Face and hands slightly burned by lamp coming in contact with powder at face. |
| | William Ruano, | Irish, | Fireman, | 27 | M. | Pine Brook, | | { Legs, face and hands slightly burned. |
| May 15 | { Joseph Raynock, | Polish, | Miner, | 25 | M. | { Mount Pleasant, | | Finger cut off by power saw in carpenter shop. Outside. |
| 29 | { Stanley Runeth, | Polish, | Laborer, | 20 | S. | .. | | Face injured. Kicked by a mule on main road. |
| | John Case, | American, | Car-repairer, | 45 | M. | Pine Brook, | | Foot injured by standing too close to a piece of loose rock removed by miner at face. |
| June 10 | Patrick McHale, | American, .. | Driver, | 25 | M. | Mount Pleasant, | | |
| | John Kaja, | Russian, | Laborer, | 28 | M. | Underwood, | | |

| | | | | | | | | |
|-------|----|-------------------------|----------------|-------------------------------|----|----|------------------------|--|
| June | 11 | John Kooshelivich, .. | Russian, .. | Miner, | 23 | S. | Nay Aug. | Hand injured by the explosion of a cap at face. |
| | 21 | Polish Boloweski, | Polish, | Driver, | 18 | S. | Mount Pleasant, | Month injured. Kicked by a mule on main road. |
| | 22 | Anthony Kulkko, | Polish, | Miner, | 51 | M. | Mount Pleasant, | Foot injured by fall of roof at face. |
| | 24 | Tony Demcon, | Italian, | Laborer, | 22 | S. | Pennsylvania No. 1, .. | Leg fractured by mine cart rolling down embankment on which he was working. Outside. |
| July | 12 | Charles Brazitus, | Lithuanian, .. | Miner, | 55 | M. | Manville, | Leg fractured by fall of roof at face. |
| | 19 | Henry Griffiths, | American, .. | Company man, .. | 27 | M. | Diamond, | Ribs fractured. Kicked by a mule on main road. |
| | 27 | Joseph Keletske, | Austrian, .. | Runner, | 37 | M. | Pine Brook, | Hip dislocated by being squeezed between cars. Outside. |
| Aug. | 3 | Michael Gausunto, .. | Italian, | Laborer, | 37 | M. | Nay Aug. | Leg cut off by fall of roof in pillar place. |
| | 28 | Charles Scrip, | Slavonian, .. | Laborer, | 33 | M. | Green Ridge, | Back injured by fall of roof in pillar place. |
| Sept. | 2 | Ignatz Mortusiewicz, .. | Polish, | Miner, | 50 | S. | Pancoast, | Hip injured by premature blast 37 feet from face. |
| | 20 | Peter Judge, | Irish, | Miner, | 33 | S. | Diamond, | Hand and hip injured by explosion of powder 12 feet from face. |
| Oct. | 25 | George Sante, | Italian, | Miner, | 28 | M. | Mount Pleasant, | Spine fractured by fall of roof at face. |
| | 6 | Certo Gregio, | Italian, | Laborer, | 28 | M. | Nay Aug. | Hand injured by fall of roof at face. |
| | 7 | Mike Orshock, | Russian, .. | Miner, | 30 | M. | Mount Pleasant, | Rib fractured by fall of roof at face. |
| | 13 | Conrad Mishosky, | Polish, | Laborer, | 35 | M. | Pennsylvania No. 5, .. | Scalp wounds by fall of roof 16 feet from face. |
| | 15 | { Martin Shimensky, .. | Polish, | Miner, | 39 | M. | Pancoast, | { Back sprained by fall of top coal at face. |
| | | { Frank Ozhurney, | Polish, | Laborer, | 24 | S. | Pancoast, | { Head injured. |
| | 22 | David Rosar, | Welsh, | Assistant fore- man, | 40 | M. | Pennsylvania No. 5, .. | Leg fractured by flying coal from blast 30 feet from face. |
| Nov. | 3 | Charles Welcho, | Polish, | Laborer, | 38 | M. | Spencer, | Leg crushed by mine cars on main road. |
| | 8 | John Walski, | Polish, | Miner, | 23 | M. | Pancoast, | Leg crushed by fall of roof at face. |
| | 9 | Ralph Lamort, | Italian, | Miner, | 30 | M. | Spencer, | Head and shoulders injured by mine cars on main road. |
| Dec. | 13 | Antonio Nalli, | Italian, | Driver, | 22 | S. | Nay Aug. | Thumb lacerated by mine cars. Outside. |
| | 1 | Steve Fillo, | Austrian, .. | Miner, | 40 | M. | Pancoast, | Leg fractured by fall of roof at face. |
| | 3 | { Patrick McKone, | Irish, | Chargeman, .. | 45 | M. | { Underwood, | Burned by explosion of gas on main road. |
| | | { Dominick Costo, | Italian, | Laborer, | 26 | S. | { | |
| | 8 | Steve Peregnut, | Polish, | Laborer, | 23 | S. | { | |
| | 8 | Andrew Huzon, | Polish, | Laborer, | 23 | S. | { | |
| | 22 | William Price, | American, .. | Engineer, | 20 | M. | Nay Aug. | Left side lacerated. Caught in machinery. |
| | | William Rafferty, | American, .. | Runner, | 21 | S. | Pancoast, | Fibula dislocated by mine cars on main road. |
| | 24 | Edward Redington, .. | Irish, | Driver, | 23 | S. | Manville, | Hand injured by cars. Outside. |
| | 28 | Peter Magolski, | Lithuanian, .. | Laborer, | 27 | S. | Pennsylvania No. 5, .. | Hand fractured by mine cars on plane. |
| | 29 | Joseph Rogers, | American, .. | Runner, | 41 | S. | Pancoast, | Scalp wound and knee injured by prema- ture blast on main road. |
| | 30 | Joseph Marchonids, .. | Italian, | Miner, | 43 | M. | Nay Aug. | Foot injured by fall of roof at face. |
| | | John McHale, | Irish, | Rockman, | 35 | M. | Mount Pleasant, | Side injured by fall of coal off rib on main road. |
| | | John Bolthy, | Slavonian, .. | Miner, | 37 | M. | { | { Back and foot bruised by fall of roof at face. |
| | | Celoia Oedin, | Italian, | Laborer, | 25 | S. | { | { Head bruised. |

Lackawanna

CONDITION OF COLLIERIES

PENNSYLVANIA COAL COMPANY

Pennsylvania No. 1 Colliery, Pennsylvania No. 1 Shaft, Gipsy Grove Shaft, Pennsylvania No. 2 Drift, Clark Slope, and Marcy Slope—Ventilation, drainage and safety conditions, good.

Pennsylvania No. 5 Colliery.—Pennsylvania No. 5 Shaft—Ventilation, drainage and safety conditions, good.

Underwood Colliery.—Underwood Shaft—Ventilation, drainage and safety conditions, good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Diamond No. 2 Shaft and Diamond Tripp Shaft.—Ventilation, drainage and safety conditions, good.

Diamond Drift.—Ventilation, drainage and safety conditions, fair.

Diamond Tripp Slope.—Ventilation, good. Drainage and safety conditions, fair.

Manville Colliery: Manville Shaft.—Ventilation, drainage and safety conditions, fair.

SCRANTON COAL COMPANY

Pine Brook Colliery: Pine Brook Shaft.—Ventilation, drainage and safety conditions, good.

Mount Pleasant Colliery: Mount Pleasant (Main) Shaft.—Ventilation, drainage and safety conditions, good.

Mount Pleasant (Surface) Shaft.—Ventilation, drainage and safety conditions, fair.

PRICE-PANCOAST COAL COMPANY

Pancoast Colliery: Pancoast Shaft.—Ventilation, drainage and safety conditions, good.

NAY AUG COAL COMPANY

Nay Aug Colliery: Nay Aug No. 1 Slope, Nay Aug Drift, and Nay Aug No. 3 Drift.—Ventilation, good. Drainage and safety conditions, fair.

SPENCER COAL COMPANY

Spencer Colliery: Spencer Nos. 1 and 2 Shafts.—Ventilation and drainage, good. Safety conditions, fair.

GREEN RIDGE COAL COMPANY

Green Ridge Colliery: Green Ridge Slope.—Ventilation, drainage and safety conditions, fair.

CARNEY AND BROWN COAL COMPANY

Carney and Brown Colliery: Carney and Brown Slope.—Ventilation, drainage and safety conditions, fair.

NO. 6 COAL COMPANY

No. 6 Colliery: No. 6 Slope.—Ventilation and drainage, good. Safety conditions, fair.

No. 6 Drift.—Ventilation and safety conditions, fair. Drainage good.

IMPROVEMENTS

PENNSYLVANIA COAL COMPANY

Underwood Colliery.—A rock slope 7 feet by 12 feet and 500 feet long, was driven from the Clark vein to the New County vein for development purposes. A wash-house for employes was built on the outside 30 feet in width and 110 feet long. A storehouse, 30 feet by 80 feet of steel and galvanized iron, was constructed. Approach to the slope from the outside to the first Dunmore vein was concreted. Much grading and finishing was done on the outside.

Pennsylvania No. 5 Colliery.—A brick building, 40 feet by 170 feet, was erected on the outside to replace the old mule barn. This building accommodates mules, outside teams and wagons. On the inside a rock tunnel was driven from the second to the third Dunmore vein in the Bunker Hill section.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Diamond Colliery.—Installed engine and fan for boiler plant. Painted three sides of breaker. The dust system in breaker is being improved. Installed conveyor line, pit, etc., for handling Cayuga coal. Also installed one 7-ton locomotive with reel, etc., two shortwall coal-cutting machines, and one longwall coal-cutting machine.

PRICE-PANCOAST COAL COMPANY

Pancoast Colliery.—Built new fire room and installed 6 new water tube Maxim boilers.

SPENCER COAL COMPANY

Spencer Colliery.—Installed 2 sets of double-deck shakers in the breaker. No. 2 shaft was retimbered, and new ropes were placed in Nos. 1 and 2 shafts.



FOURTH DISTRICT

LACKAWANNA COUNTY

Scranton, Pa., February 15, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the Fourth Anthracite District, for the year ending December 31, 1915.

Respectfully submitted,

JENKIN T. REESE,
Inspector.

SUMMARY OF STATISTICS

| | |
|--|-----------|
| Number of collieries, | 15 |
| Number of mines, | 37 |
| Number of mines in operation, | 37 |
| Number of tons of coal shipped to market, | 3,326,411 |
| Number of tons used at mines for steam and heat, | 131,084 |
| Number of tons sold to local trade and used by employes, | 166,545 |
| Number of tons produced, | 3,624,040 |
| Number of tons produced by compressed air machines, ..... | ..... |
| Number of tons produced by electrical machines, .... | ..... |
| Number of persons employed inside of mines, | 7,011 |
| Number of persons employed outside, | 1,663 |
| Number of fatal accidents inside of mines, | 29 |
| Number of fatal accidents outside, ..... | ..... |
| Number of non-fatal accidents inside of mines, | 41 |
| Number of non-fatal accidents outside, | 1 |
| Number of tons of coal produced per fatal accident in- side, | 124,967 |
| Number of tons produced per fatal accident outside,... | ..... |
| Number of tons produced per fatal accident inside and outside, | 124,967 |
| Number of persons employed per fatal accident inside, .. | 242 |
| Number of persons employed per fatal accident outside, .. | ..... |
| Number of persons employed per fatal accident inside and outside, | 299 |
| Number of persons employed per non-fatal accident in- side, | 171 |
| Number of persons employed per non-fatal accident out- side, | 1,663 |
| Number of persons employed per non-fatal accident in- side and outside, | 207 |
| Number of wives made widows, | 20 |
| Number of children made orphans, | 43 |
| Number of steam locomotives used inside of mines, ... | 1 |
| Number of steam locomotives used outside, | 13 |
| Number of compressed air locomotives used inside, .... | ..... |
| Number of compressed air locomotives used outside, | 1 |
| Number of electric motors used inside, | 105 |
| Number of electric motors used outside, | 1 |
| Number of gasoline locomotives used inside, | 1 |
| Number of fans in use, | 24 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 22 |
| Number of non-gaseous mines in operation, | 15 |
| Number of new mines opened, | 1 |
| Number of old mines abandoned, ..... | ..... |

TABLE A
PRODUCTION OF COAL

| Names of Operators | Tons |
|--|-----------|
| Delaware, Lackawanna and Western Railroad Company, | 2,774,460 |
| Delaware and Hudson Company, | 356,937 |
| Peoples Coal Company, | 227,105 |
| Scranton Coal Company, | 173,793 |
| South Side Coal Company, | 43,779 |
| Minooka Coal Company, | 16,910 |
| Carleton Coal Company, | 14,500 |
| Scranton Anthracite Coal Company, | 12,500 |
| Spruks Coal Company, | 4,056 |
| Total, | 3,624,040 |

Production by Counties

| | |
|-------------------|-----------|
| Lackawanna, | 3,624,040 |
|-------------------|-----------|

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|--|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| Delaware, Lackawanna and Western Railroad Co., | 20 | ..... | 20 | 25 | ..... | 25 | 138,723 | 106,710 | 5,382 | 1,130 | 6,512 | 269 | ..... | 297 | ..... |
| Delaware and Hudson Co., | 5 | ..... | 5 | 7 | ..... | 7 | 71,337 | 50,991 | 677 | 230 | 907 | 135 | ..... | 97 | ..... |
| Peoples Coal Co., | 1 | ..... | 1 | ..... | 1 | ..... | 227,105 | ..... | 319 | 106 | 425 | 319 | ..... | ..... | ..... |
| Seranton Coal Co., | 2 | ..... | 2 | 7 | ..... | 7 | 86,897 | 24,828 | 425 | 97 | 522 | 213 | ..... | 61 | ..... |
| Seranton Anthracite Coal Co., | 1 | ..... | 1 | ..... | ..... | ..... | 14,500 | ..... | 30 | 15 | 45 | 30 | ..... | ..... | ..... |
| Miscellaneous Companies, ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | 12,500 | 112 | 18 | 130 | ..... | ..... | 112 | ..... |
| ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 66 | 67 | 133 | ..... | ..... | ..... | ..... |
| Totals and averages, | 29 | ..... | 29 | 40 | 1 | 42 | 121,997 | 88,391 | 7,011 | 1,663 | 8,674 | 242 | ..... | 171 | 1,663 |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Percentages |
|--|----------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|------------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | Totals |
| Inside | | | | | | | | | | | | | |
| Falls of coal, | | | 1 | | | | | | | | | 1 | 2 6.90 |
| Falls of roof, | | 1 | | | 4 | 1 | 1 | 1 | 1 | 1 | | 1 | 15 51.72 |
| Mine cars, | | | | | | | | | 1 | | | | 7 24.14 |
| Explosions of gas, | | | | | | | | | | 2 | | | 2 6.90 |
| Blasts, premature and otherwise, | | | | | | | | | | | 2 | | 2 6.89 |
| Falling into shafts, | | | | 1 | | | | | | | | | 1 3.45 |
| Totals, | 2 | 1 | 1 | 3 | 4 | 3 | 1 | 1 | 2 | 4 | 4 | 3 | 29 100.00 |
| Outside (No Accidents) | | | | | | | | | | | | | |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Percentages |
|---|----------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|-----------|-----------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | Totals |
| Inside | | | | | | | | | | | | | |
| Falls of coal, | | 2 | | | | | | | | | | 1 | 1 2.44 |
| Falls of roof, | | | 1 | 1 | | 3 | | 3 | 1 | | | | 16 39.02 |
| Mine cars, | | 1 | 1 | | | | 1 | | 1 | | 1 | 1 | 10 24.39 |
| Explosions of powder and dynamite, | | 1 | | | | | | | | | 1 | | 2 4.88 |
| Blasts, premature and otherwise, | | | 2 | 1 | | | 1 | | | | 1 | | 7 17.07 |
| Struck by piece of rock | | | | | | | | | | | 1 | | 1 2.44 |
| Struck by piece of steel, | | | | | | | 1 | | | | | | 1 2.44 |
| Struck by rope, | | | 1 | | | | | | | | | | 1 2.44 |
| Falling, | | | 1 | 1 | | | | | | | | | 2 4.88 |
| Totals, | 4 | 4 | 6 | 5 | 2 | 3 | 4 | 3 | 2 | 6 | 2 | 41 | 100.00 |
| Outside | | | | | | | | | | | | | |
| Cars, | | | | | | 1 | | | | | | | 1 100.00 |
| Totals, | | | | | | 1 | | | | | | | 1 100.00 |
| Grand totals inside and outside, | 4 | 4 | 6 | 5 | 2 | 4 | 4 | 3 | 2 | 6 | 2 | 42 | 100.00 |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-----------------------------|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, ..... | ..... | ..... | 1 | 2 | 2 | 1 | 1 | 1 | ..... | 2 | 3 | 1 | 14 |
| Miners' laborers, | 1 | 1 | ..... | ..... | 1 | 1 | ..... | ..... | 1 | 1 | 1 | 1 | 8 |
| Drivers and runners, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 |
| Doorboys and helpers, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 2 |
| Brakemen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 |
| Rockmen, ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Pillar bosses, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Carpenters, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, | 2 | 1 | 1 | 3 | 4 | 3 | 1 | 1 | 2 | 4 | 4 | 3 | 29 |
| Outside | | | | | | | | | | | | | |
| (No Accidents) | | | | | | | | | | | | | |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, | 1 | 1 | 3 | 2 | 1 | 1 | 3 | 2 | 1 | .... | 1 | 1 | 18 |
| Miners' laborers, | 1 | 2 | 2 | 2 | 1 | 2 | .... | 1 | .... | .... | 2 | .... | 13 |
| Drivers and runners, ..... | .... | .... | 1 | .... | .... | .... | .... | .... | 1 | .... | .... | 1 | 3 |
| Doorboys and helpers, | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 |
| Company men, | 1 | 1 | .... | .... | .... | .... | 1 | .... | .... | .... | 1 | .... | 4 |
| Contractors, ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | 1 |
| Masons, ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | 1 |
| Totals, | 4 | 4 | 6 | 5 | 2 | 3 | 4 | 3 | 2 | .... | 6 | 2 | 41 |
| Outside | | | | | | | | | | | | | |
| Runners, ..... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | 1 |
| Totals, ..... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | 1 |
| Grand totals inside and outside, | 4 | 4 | 6 | 5 | 2 | 4 | 4 | 3 | 2 | .... | 6 | 2 | 42 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-------------------|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American, | 1 | 1 | .... | 1 | .... | 1 | .... | 1 | 1 | .... | .... | 1 | 7 |
| Welsh, | 1 | .... | 1 | .... | 1 | .... | .... | .... | .... | .... | 1 | .... | 3 |
| Irish, ..... | .... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | 1 | .... | 2 |
| Polish, ..... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | 1 |
| Italian, ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | 1 |
| Slavonian, ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Lithuanian, ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| Russian, ..... | .... | .... | .... | .... | .... | 1 | .... | .... | 1 | 1 | .... | 1 | 3 |
| Totals, | 2 | 1 | 1 | 2 | 4 | 2 | 1 | 1 | 2 | 4 | 4 | 3 | 29 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-------------------|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American, | 1 | 1 | 1 | .... | .... | 1 | 1 | .... | .... | .... | 1 | 1 | 7 |
| Welsh, ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | 1 |
| Irish, ..... | .... | .... | 1 | .... | .... | .... | .... | .... | 1 | .... | 1 | .... | 2 |
| Polish, | 1 | .... | 1 | .... | .... | 1 | .... | .... | .... | .... | 1 | .... | 3 |
| Italian, ..... | .... | 1 | .... | 1 | .... | .... | .... | .... | 1 | .... | .... | .... | 2 |
| Slavonian, ..... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 |
| Lithuanian, ..... | .... | .... | .... | 1 | .... | .... | .... | 1 | .... | .... | 1 | .... | 2 |
| Russian, ..... | .... | .... | 1 | .... | .... | .... | 1 | .... | .... | .... | .... | .... | 2 |
| Swedish, ..... | .... | .... | 1 | 1 | .... | .... | .... | .... | .... | .... | 1 | .... | 2 |
| Totals, | 4 | 4 | 6 | 5 | 2 | 4 | 4 | 3 | 2 | .... | 6 | 2 | 42 |

TABLE I —Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Area of furnace bars in square feet | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|---|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|-------------|-----------------|-------------------------------------|----------------------------------|---|--|--|-----------------------------------|
| Delaware, Lackawanna and Western Railroad Co. | | | | | | | | | | | | | | | | |
| Bellevue Colliery: | | | | | | | | | | | | | | | | |
| Bellevue, | Shaft, | Gaseous, .. | Fan, | 18 | 8 | 3 | 80 | 2 | Vulcan, .. | Steam, ..... | ..... | 19 | 246,498 | 224,526 | 282,490 | 877 |
| Bellevue, | Slope, | Gaseous, .. | Fan, | 14 | 4.5 | 4 | 110 | .9 | Guibal, .. | Steam, ..... | ..... | 2 | 31,000 | 29,125 | 41,000 | ..... |
| Dodge Colliery: | | | | | | | | | | | | | | | | |
| Dodge, | Shaft, | Gaseous, .. | Fan, | 25 | 8 | 6.6 | 58 | 1.3 | Vulcan, .. | Steam, ..... | ..... | 9 | 123,290 | 103,618 | 219,458 | 587 |
| Dodge, | Slope, | Non-gas., .. | Fan, | 15 | 3.6 | 4.6 | 56 | .6 | Guibal, .. | Steam, ..... | ..... | 1 | 26,753 | 23,049 | 27,352 | ..... |
| Holden Colliery: | | | | | | | | | | | | | | | | |
| Holden, | Shaft, | Gaseous, .. | Fan, | 25 | 7.6 | 7 | 54 | 1 | Guibal, .. | Steam, ..... | ..... | 8 | 182,486 | 106,459 | 270,042 | 350 |
| Holden, | Slope, | Non-gas., .. | Fan, | 17 | 6 | 3.3 | 67 | 1.3 | Guibal, .. | Steam, ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| National Colliery: | | | | | | | | | | | | | | | | |
| National, | Shaft, | Gaseous, .. | Fan, | 25 | 8 | 7 | 60 | 1.5 | Guibal, .. | Steam, ..... | ..... | 9 | 174,209 | 159,400 | 195,400 | ..... |
| National, | Drift, | Gaseous, .. | Fan, | 8 | 2.8 | 2.2 | 80 | .5 | Guibal, .. | Electricity, .. | ..... | 1 | 12,000 | 11,000 | 12,500 | 648 |
| National, | Drift, | Gaseous, .. | Fan, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Archbald Colliery: | | | | | | | | | | | | | | | | |
| Archbald, | Shaft, | Gaseous, .. | Fan, | 24 | 8 | 6 | 66 | 1.8 | Guibal, .. | Steam, ..... | ..... | 15 | 244,720 | 276,890 | 273,550 | 775 |
| Archbald, | Slope, | Gaseous, .. | Fan, | 12 | 4 | 4 | 100 | 1 | Open, | Steam, ..... | ..... | 1 | 33,020 | 30,115 | 44,515 | ..... |
| Continental Colliery: | | | | | | | | | | | | | | | | |
| Continental, | Shaft, | Gaseous, .. | Fan, | 24 | 8 | 6 | 66 | 2 | Guibal, .. | Steam, ..... | ..... | 10 | 197,325 | 198,475 | 209,825 | 506 |
| Hyde Park Colliery: | | | | | | | | | | | | | | | | |
| Hyde Park, | Shaft, | Gaseous, .. | Fan, | 24 | 8 | 6 | 64 | 1.8 | Guibal, .. | Steam, ..... | ..... | 9 | 198,500 | 108,100 | 156,900 | 467 |
| Central, | Shaft, | Gaseous, .. | Fan, | 14 | 4.5 | 4 | 115 | 1.3 | Open, | Electricity, .. | ..... | 3 | 39,200 | 39,200 | 79,000 | ..... |
| Hyde Park (Surface), | Slope, | Non-gas., .. | Fan, | 14 | 4.5 | 4 | 115 | 1.3 | Guibal, .. | Electricity, .. | ..... | 5 | 69,700 | 58,880 | 78,400 | 242 |

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|---|----------------|----------------------------------|-------------------|--|-----------------|--------------------|
| Delaware, Lackawanna and Western Railroad Co. | | | | | | |
| Bellefonte, | Lackawanna. | R. A. Phillips, General Manager. | Scranton, | David Lloyd, | Scranton, | D. L. and W. |
| Borden, | | | | | | |
| National, | | | | | | |
| Archbald, | | | | | | |
| Continental, | | | | | | |
| Hyde Park, | Lackawanna. | R. A. Phillips, General Manager. | Scranton, | Thomas J. Williams, | Scranton, | D. L. and W. |
| Sloan, | | | | | | |
| Washeries | | | | | | |
| Archbald, | | | | | | |
| Hyde Park, | | | | | | |
| Hampton, | Lackawanna, .. | R. A. Phillips, | Scranton, | Thomas J. Williams, | Scranton, | D. L. and W. |
| Delaware and Hudson Co. | | | | | | |
| Greenwood, | Lackawanna, .. | E. R. Pettibone, .. | Dorrancton, | Charles Dorrance, Jr. | Scranton, | D. and H. |
| Greenwood Washery, | | | | | | |
| Peoples Coal Co., | Lackawanna, .. | S. D. Dimmick, | Scranton, | William McLaughlin, | Scranton, | D. L. and W. |
| Scranton Coal Co., | Lackawanna, .. | W. L. Allen, | Scranton, | Daniel Young, Inside, J. F. Cummings, Outside, | Scranton, | N. Y. O. and W. |
| Carpouse, | | | | | | |
| South Side Coal Co. 1, | Lackawanna, .. | Frank B. Benjamin, | Scranton, | | | D. and H. |
| South Side Washery No. 2, | | | | | | |
| South Side Washery No. 3, | | | | | | |
| Minooka Coal Co., | Lackawanna, .. | H. M. Howard, | Scranton, | William Carter, | Minooka, | D. L. and W. |
| Carleton Coal Co., | Lackawanna, .. | John Gibbons, | Scranton, | | | Local trade |
| Scranton Anthracite Coal Co. Oak Hill,* | Lackawanna, .. | J. D. O'Toole, | Scranton, | | | Erie and D. and H. |
| Spruiks Coal Co., | | | | | | |
| East Mountain, | Lackawanna, .. | David Spruiks, | Scranton, | Jonathan Vipond, .. | Scranton, | Erie |

*New mine

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employes | Total production of coal in tons | Number of days worked | Number of employes | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | |
|---|-------------|--|--|---|----------------------------------|-----------------------|--------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|--|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Delaware, Lackawanna and Western Railroad Co. | | | | | | | | | | | | | |
| Bellevue, | Lackawanna. | 478,737 | ..... | 31,916 | 510,653 | 233 | 1,032 | ..... | 4 | 394,500 | 23,189 | ..... |  |
| Dodge, | | 319,057 | 42 | 1,179 | 319,278 | 299 | 796 | ..... | ..... | 419,660 | 38,148 | ..... |  |
| Holden, | | 189,355 | 12,007 | 1,886 | 203,248 | 231 | 450 | ..... | ..... | 187,635 | 8,711 | ..... |  |
| National, | | 296,984 | 10,918 | 5,091 | 312,996 | 236 | 758 | ..... | ..... | 403,409 | 25,225 | ..... |  |
| Archbald, | | 337,235 | 17,362 | 449 | 405,047 | 228 | 925 | ..... | ..... | 403,409 | 25,225 | ..... |  |
| Continental, | | 294,624 | 45 | 2,631 | 297,299 | 235 | 625 | ..... | ..... | 270,972 | 30,841 | ..... |  |
| Hyde Park, | | 274,662 | 41 | 23,383 | 298,086 | 229 | 839 | ..... | ..... | 484,550 | 30,400 | ..... |  |
| Sloan, | | 366,818 | 151 | 17 | 366,986 | 295 | 1,052 | ..... | ..... | 694,750 | 67,115 | 7,003 | |
| Totals, | | 2,517,473 | 49,566 | 65,575 | 2,623,614 | ..... | 6,378 | 29 | 26 | 3,618,999 | 232,501 | 7,003 | |
| Washeries | | | | | | | | | | | | | |
| Archbald, | Lackawanna. | 5,678 | ..... | ..... | 5,658 | 17 | 48 | ..... | ..... | ..... | ..... | ..... |  |
| Hyde Park, | | 52,708 | ..... | ..... | 52,708 | 170 | 32 | ..... | ..... | ..... | ..... | ..... |  |
| Hampton, | | 92,489 | ..... | ..... | 92,480 | 165 | 54 | ..... | ..... | ..... | ..... | ..... |  |
| Totals, | | 150,846 | ..... | ..... | 150,846 | ..... | 131 | ..... | ..... | ..... | ..... | ..... |  |
| Delaware and Hudson Co. | | | | | | | | | | | | | |
| Greenwood, | Lackawanna. | 278,647 | 33,007 | 2,904 | 314,558 | 183 | 896 | 5 | 8 | 472,375 | 66,575 | ..... |  |
| Greenwood Washery, | Lackawanna. | 25,324 | 17,055 | ..... | 42,379 | 105 | 11 | ..... | ..... | ..... | ..... | ..... |  |
| Totals, | | 303,971 | 50,062 | 2,904 | 356,937 | ..... | 907 | 5 | 8 | 472,375 | 66,575 | ..... |  |

TABLE 2.—Continued

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|--|-------------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Oxford, | Lackawanna, | 132,691 | 12,855 | 81,559 | 227,105 | 240 | 425 | 1 | ..... | 19,850 | 8,500 | ..... | 48 |
| Capouse, | Lackawanna, | 145,825 | 25,500 | 2,468 | 173,793 | 154 | 522 | 2 | 7 | 169,300 | 15,000 | ..... | 75 |
| South Side Coal Co. South Side Washery No. 1, | Lackawanna, | 8,576 | 120 | ..... | 8,696 | 76 | 25 | ..... | ..... | ..... | ..... | ..... | ..... |
| South Side Washery No. 2, | Lackawanna, | 24,785 | 181 | 117 | 35,083 | 188 | 27 | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, ..... | ..... | 43,361 | 301 | 117 | 43,779 | ..... | 52 | ..... | ..... | ..... | ..... | ..... | ..... |
| Minooka Coal Co. Minooka, | Lackawanna, | 16,910 | ..... | ..... | 16,910 | 263 | 49 | ..... | ..... | 11,250 | 1,400 | ..... | 8 |
| Carleton Coal Co. Carleton, | Lackawanna, | 2,206 | 300 | 12,000 | 14,500 | 270 | 45 | 1 | ..... | 7,500 | 1,500 | ..... | 14 |
| Scranlon Anthracite Coal Co. Oak Hill, | Lackawanna, | 11,000 | 1,500 | ..... | 12,500 | 215 | 130 | ..... | 1 | 25,000 | 250 | ..... | 10 |
| Spruks Coal Co. East Mountain, | Lackawanna, | 2,134 | ..... | 1,922 | 4,056 | 70 | 32 | ..... | ..... | 3,750 | ..... | 200 | 9 |
| Grand totals, ..... | ..... | 3,326,411 | 131,084 | 166,545 | 3,624,040 | ..... | 8,674 | 29 | 42 | 4,327,885 | 325,726 | 7,203 | 671 |

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | Locomotives | | | | Total horse power | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors |
|--|-------------|-------------------|-------------|---------|-------------|-------------------|----------|-------|-------|-------------------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Alr | Electric | | | | | | | |
| Delaware, Lackawanna and Western Railroad Co., | Lackawanna, | 13 | 780 | 15 | 3,280 | 4,168 | ..... | 10 | ..... | 101 | 73 | 12,500 | 20 | 17,431 | 8,021 | 0 | 1 |
| Delaware and Hudson Co., | | 15 | 423 | 16 | 1,580 | 2,003 | ..... | 4 | ..... | ..... | 17 | 855 | 3 | 3,000 | 3,000 | 1 | 3 |
| Peoples Coal Co., ..... |  | ..... | ..... | 5 | 1,500 | 1,500 | ..... | ..... | ..... | 3 | 17 | 855 | 3 | 3,000 | 3,000 | 1 | 1 |
| Scranton Coal Co., ..... |  | ..... | ..... | 5 | 1,500 | 1,500 | ..... | ..... | ..... | ..... | 17 | 1,210 | 3 | 5,700 | 4,300 | 1 | 1 |
| South Side Coal Co., ..... |  | ..... | ..... | ..... | 1,075 | 1,075 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 14 | ..... |
| Minooka Coal Co., ..... |  | ..... | ..... | ..... | ..... | 50 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Scranton Coal Co., | | 1 | 50 | 2 | 200 | 200 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Scranton Anthracite Coal Co., ..... |  | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Spruhs Coal Co., ..... |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, ..... | ..... | 24 | 1,253 | 39 | 7,964 | 9,217 | ..... | 1 | ..... | 105 | 121 | 15,245 | 37 | 29,706 | 15,796 | 32 | 13 |

TABLE 3.—Part 2

| Names of Operators | County | Average Number of Days Worked Monthly | | | | | | | | | | | |
|--|-------------|---------------------------------------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|
| | | January | February | March | April | May | June | July | August | September | October | November | December |
| Delaware, Lackawanna and Western Railroad Co., ... | Lackawanna, | 12 | 14 | 14 | 22 | 21 | 21 | 12 | 22 | 20 | 21 | 23 | 24 |
| Delaware and Hudson Co., | | 16 | 14 | 15 | 15 | 16 | 17 | 12 | 17 | 17 | 15 | 13 | 15 |
| Peoples Coal Co., | | 21 | 20 | 20 | 19 | 20 | 19 | 19 | 20 | 20 | 21 | 21 | 20 |
| Seranton Coal Co., | | 13 | 11 | 11 | 15 | 12 | 10 | 16 | 10 | 11 | 15 | 15 | 15 |
| Minorka Coal Co., | | 24 | 20 | 21 | 21 | 20 | 20 | 25 | 22 | 20 | 22 | 26 | 21 |
| Carlston Coal Co., | | 22 | 22 | 23 | 23 | 22 | 22 | 22 | 24 | 22 | 22 | 24 | 24 |
| Seranton Anthracite Coal Co., ..... |  | ..... | ..... | 20 | 21 | 15 | 23 | 21 | 24 | 21 | 21 | 24 | 24 |
| Spruiks Coal Co., ..... |  | ..... | ..... | ..... | ..... | 4 | ..... | ..... | ..... | 4 | 22 | 18 | 22 |
| Totals |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|-------|---------------------------|----------------|-----------------|-----|-------------------|------------------|-------------------|---------------------|-------------|--|
| Jan. | 7 Martin Flaherty, | American, .. | Laborer, .. | 26 | S. | ..... | ..... | Hollen, | Lackawanna. | Killed by runaway cars on plane. |
| Feb. | 27 Thomas Join, | Welsh, | Doorman, .. | 60 | S. | ..... | ..... | Bellevue, | | Killed by fall of roof at face of his chamber. |
| Feb. | 13 Thomas Gore, | American, .. | Laborer, .. | 38 | M. | 1 | ..... | National, | | Killed by fall of coal at face of his chamber. |
| March | 16 Patrick Finerty, | Irish, | Miner, | 48 | M. | 1 | 3 | National, | | Killed by fall of roof at face of his chamber. |
| April | 22 Joseph Green, | Russian, | Miner, | 38 | M. | 1 | 2 | Greenwood, | | Killed by fall of roof at face of his chamber. |
| | Alex Menotcka, | Russian, | Miner, | 49 | M. | 1 | 6 | Greenwood, | | Killed by fall of roof at face of his chamber. |
| | Robert Williams, | American, .. | Carpenter, .. | 36 | M. | 1 | 3 | Shoan, | | Killed by falling down shaft while examining the cage. |
| May | 7 Anthony Warkunas, .. | Lithuanian, .. | Miner, | 41 | S. | ..... | ..... | Shoan, | | Killed by fall of roof at face of his chamber. |
| 15 | Charles Bennett, | Lithuanian, .. | Miner, | 48 | M. | 1 | ..... | Cyprese, | | Killed by fall of roof at face of his chamber. |
| | Traylowskas Maduzun, .. | Lithuanian, .. | Laborer, | 19 | S. | ..... | ..... | Cyprese, | | Killed by fall of roof at face of his chamber. |
| June | 21 Thomas Jones, | Welsh, | Pillar boss, .. | 54 | M. | 1 | 4 | Confidential, | Lackawanna. | Killed by fall of roof on pillar work. |
| 16 | Edoardo Verella, | Italian, | Laborer, | 21 | S. | ..... | ..... | Confidential, | | Killed by cars in chamber. |
| 16 | David Williams, | American, .. | Rockman, | 37 | M. | 1 | ..... | Dodge, | | Killed by fall of roof at face of his chamber. |
| 16 | Julian Nevroskie, | Russian, | Miner, | 44 | M. | 1 | 3 | Greenwood, | | Killed by fall of roof at face of his chamber. |
| July | 16 Wladislaw Mosar, | Polish, | Miner, | 32 | S. | ..... | ..... | Oxford, | | Killed by fall of roof at face of his chamber. |
| Aug. | 27 Lewis Collins, | American, .. | Miner, | 45 | M. | 1 | ..... | Bellevue, | | Killed by fall of roof at face of his chamber. |
| Sept. | 10 William Fegar, | Russian, | Laborer, | 40 | M. | 1 | 6 | National, | | Killed by fall of roof at face of chamber. |
| 24 | Aloysius Durkin, | American, .. | Driver, | 38 | S. | ..... | ..... | Hollen, | | Killed by cars on gangway. |
| Oct. | 6 Percy Ducluck, | Slavonian, .. | Miner, | 32 | M. | 1 | 3 | Hollen, | | Fatally burned by explosion of gas in chamber. |
| | John Francis, | Slavonian, .. | Laborer, | 27 | S. | ..... | ..... | Hollen, | | Fatally burned by explosion of gas in chamber. |
| 19 | Steve Cheponi, | Russian, | Doorman, | 55 | M. | 1 | 2 | Hollen, | Lackawanna. | Killed by cars on gangway. |
| 22 | Stanley Zozarski, | Russian, | Miner, | 39 | M. | 1 | 2 | Greenwood, | | Killed by fall of roof on pillar work. |

| | | | | | | | | | | | | |
|------|----|------------------------|----------------|--------------|----|----|-------|-------|------------------|--|--|--|
| Nov. | 5 | Floyd Hensinger, | German, | Minor, | 36 | M. | 1 | ..... | Holden, | | | Killed by explosion of blast at face of chamber. |
| | 16 | Daniel Evans, | Welsh, | Minor, | 39 | M. | 1 | ..... | Hyde Park, | | | Killed by explosion of blast at face of chamber. |
| | 17 | Joseph Cichin, | Italian, | Laborer, .. | 43 | M. | 1 | ..... | National, | | | Killed by fall of roof at face of chamber. |
| | 29 | Joseph Wilinski, | Polish, | Minor, .. | 53 | M. | 1 | ..... | Dodge, | | | Killed by fall of roof at face of chamber. |
| Dec. | 2 | George Wlinski, .. | Polish, | Minor, .. | 48 | S. | ..... | 8 | Sloan, | | | Killed by fall of roof at face of chamber. |
| | 17 | George Gannon, | American, .. | Prakeman, .. | 22 | M. | 1 | ..... | Holden, | | | Killed by fall of roof at face of chamber. |
| | 23 | Benjamin Cosackie, .. | Russian, | Laborer, .. | 25 | M. | 1 | ..... | Greenwood, | | | Killed by fall of coal at face of chamber. |

Lackawanna.

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|------------------------|----------------|--------------------|-----|-------------------|--------------------|-------------|--|
| Jan. 5 | John Mulhern, | Irish, | Miner, | 42 | M. | Sloan, | Lackawanna, | Face and hands bruised by explosion of blast at face of chamber. |
| | William Kins, | American, .. | Company man, | 39 | M. | Sloan, | | Face and head bruised by explosion of blast at face of chamber. |
| 27 | John Judge, | Irish, | Doorman, | 51 | M. | Bellevue, | | Leg broken by cars on gangway. |
| Feb. 3 | William Smilock, | Polish, | Laborer, | 39 | M. | Bellevue, | | Leg broken by cars on gangway. |
| | Nessie Ladreca, | Italian, | Miner, | 28 | M. | National, | | Spine injured by fall of roof at face of chamber. |
| 8 | Robert Moran, | American, .. | Company man, | 43 | S. | Capouse, | | Leg bruised by cars at face of chamber. |
| 13 | Anthony Saverduski, .. | Lithuanian, .. | Laborer, | 31 | S. | Capouse, | | Face and hands burned by explosion of powder in chamber. |
| 23 | George Gladonis, | Lithuanian, .. | Laborer, | 22 | S. | Capouse, | | Face of chamber bruised by fall of roof at face of chamber. |
| March 1 | Tapsil Davodoski, | Polish, | Laborer, | 27 | M. | Continental, | | Clavical fractured by falling at face of chamber. |
| 8 | Michael Plack, | American, .. | Driver, | 29 | S. | Hyde Park, | | Leg fractured by cars on gangway. |
| 19 | Thomas Rofcski, | Russian, | Miner, | 33 | M. | Greenwood, | | Arm fractured by fall of roof at face of chamber. |
| 15 | Michael Elisla, | Slavonian, .. | Miner, | 36 | W. | Hollen, | | Face burned by explosion of blast at face of chamber. |
| 24 | Daniel Hartnet, | Irish, | Laborer, | 21 | M. | Hollen, | | Leg fractured by being struck by rope on the slope. |
| 31 | Herman Hutherg, | Swedish, | Miner, | 32 | M. | Hyde Park, | | Eyes destroyed by explosion of blast at face of chamber. |
| April 7 | Ignatz Le-hik, | Russian, | Miner, | 24 | S. | Bellevue, | | Arm fractured by explosion of blast at face of chamber. |
| 29 | Ludwig Deth, | Russian, | Laborer, | 29 | S. | Greenwood, | | Leg fractured by cars on gangway. |
| 21 | Charles Johnson, | Swedish, | Miner, | 29 | M. | Hyde Park, | | Arm bruised by falling in chamber. |
| 22 | Simon Levetskie, | Lithuanian, .. | Laborer, | 33 | S. | Hyde Park, | | Arm fractured by cars at face of chamber. |
| 30 | Ualdo Fannuel, | Italian, | Miner, | 40 | S. | National, | | Body bruised by fall of roof at face of chamber. |
| May 10 | Michael Grayeskie, .. | Russian, | Miner, | 33 | M. | Greenwood, | | Spine injured by fall of roof at face of chamber. |
| 18 | Benjamin Lach, | Russian, | Laborer, | 27 | S. | Greenwood, | | Back bruised by fall of roof at face of chamber. |

| | | | | | | | | |
|-------|----|-------------------------|----------------|-----------------|----|----|------------------|--|
| June | 19 | William Gallagher, .. | American, .. | Runner, | 22 | S. | Greenwood, | Fingers cut off by cars. Outside. |
| | 15 | Simon Taborus, | Lithuanian, .. | Laborer, | 23 | S. | Sloan, | Back bruised by fall of roof at face of chamber. |
| | 16 | Anthony Druhnack, .. | Polish, | Laborer, | 36 | M. | Archbald, | Leg fractured by fall of roof at face of chamber. |
| | 19 | Peter Slatz, | Lithuanian, .. | Miner, | 38 | M. | Capouse, | Back bruised by fall of roof at face of chamber. |
| July | 2 | John Nourusky, | Polish, | Miner, | 53 | M. | Bellevue, | Back bruised by explosion of blast at face of chamber. |
| | 16 | James Connelly, | American, .. | Company man, .. | 34 | M. | Greenwood, | Eye injured by flying steel while cutting a rail. |
| | 29 | Powell Marchick, | Russian, | Miner, | 43 | M. | Greenwood, | Leg fractured by fall of roof at face of chamber. |
| | 30 | Andrew Ponkilo, | Polish, | Miner, | 26 | M. | Archbald, | Seriously injured by cars in chamber. |
| Aug. | 25 | Frank Sackman, | Polish, | Miner, | 42 | M. | Archbald, | Scalp lacerated by fall of roof at face of chamber. |
| | 27 | George Cahor, | Polish, | Laborer, | 23 | S. | Sloan, | Leg fractured by fall of roof at face of chamber. |
| | 30 | George Milkins, | Lithuanian, .. | Miner, | 55 | M. | Capouse, | Back bruised by fall of roof at face of chamber. |
| Sept. | 8 | Jeremiah Harrington, .. | Irish, | Driver, | 18 | S. | Greenwood, | Back fractured by cars on gangway. |
| | 27 | Peter Baldricea, | Italian, | Miner, | 37 | S. | National, | Leg fractured by fall of roof at face of chamber. |
| Nov. | 3 | Roman Mauslik, | Polish, | Laborer, | 34 | M. | Sloan, | Chest bruised by fall of roof at face of chamber. |
| | 4 | Thomas Burke, | Irish, | Mason, | 52 | M. | National, | Leg broken by rock striking him while repairing wall on gangway. |
| | 5 | John James, | Welsh, | Contractor, .. | 51 | M. | Holden, | Body bruised by explosion of blast at face of tunnel. |
| | 8 | John French, | American, .. | Company man, .. | 30 | M. | Archbald, | Leg fractured by cars on gangway. |
| | | Freely Shnosky, | Lithuanian, .. | Miner, | 38 | M. | Capouse, | Leg fractured by fall of roof at face of chamber. |
| | 11 | August Larson, | Swedish, | Laborer, | 42 | S. | Hyde Park, | Forearm and hands burned by explosion of dynamite in chamber. |
| Dec. | 14 | Edwin Joncender, | American, .. | Driver, | 24 | M. | Oak Hill, | Leg fractured by cars on gangway. |
| | 23 | George Milkus, | Lithuanian, .. | Miner, | 52 | M. | Capouse, | Leg fractured by fall of coal at face of chamber. |

Lackawanna.

CONDITION OF COLLIERIES

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Bellevue, Dodge, Holden, National, Archbald, Continental, Hyde Park and Sloan Collieries.—Ventilation, drainage and condition as to safety, good.

DELAWARE AND HUDSON COMPANY

Greenwood Colliery.—Ventilation, drainage and condition as to safety, good.

PEOPLES COAL COMPANY

Oxford Colliery.—Ventilation, drainage and condition as to safety, good.

SCRANTON COAL COMPANY

Capouse Colliery.—Ventilation, drainage and condition as to safety, good.

MINOOKA COAL COMPANY

Minooka Colliery.—Ventilation, drainage and condition as to safety, good.

CARLETON COAL COMPANY

Carleton Colliery.—Ventilation, drainage and condition as to safety, good.

SCRANTON ANTHRACITE COAL COMPANY

Oak Hill Colliery.—Ventilation, drainage and condition as to safety, good.

SPRUKS COAL COMPANY

East Mountain Colliery.—Ventilation, drainage and condition as to safety, good.

IMPROVEMENTS

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Bellevue Colliery.—Reopening water courses through silt, Clark vein, for drainage purposes.

Dodge Colliery.—Completed sump in No. 2 Dunmore vein, to take care of the surplus water. Also completed new foot and tunnel from Rock vein to bottom split, Diamond vein, for haulage purposes.

Outside:—Erected a brick and concrete blacksmith and carpenter shop. Built a new mule barn in order to avoid crossing railroad tracks with the mules, which had to be done in the case of the use of the old barn.

Holden Colliery.—Completed rock tunnel from New County vein to Big vein, for haulage purposes. Installed a new steam pump to take care of the surplus water.

Outside:—Renewed casing on ventilating fan.

National Colliery.—Repaired shaft tower. Installed new boilers in order to be able to generate the required amount of steam necessary to operate machinery with safety.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in Scranton, May 18 and 19. The Board of Examiners was composed of Jenkin T. Reese, Mine Inspector; Joseph P. Jennings, Superintendent, Moosic; James W. Reese, Miner, Scranton; and William J. Jenkins, Miner, Scranton.

The following persons passed a satisfactory examination and were granted certificates:

MINE FOREMEN

G. Elliott Acker, Richard S. Arscott, Richard Banks, August Bogdansky, Edwin D. Bowen, John J. Cadden, Abel Davis, Anthony Dowgiallo, Thomas J. Evans, Philip Evans, Thomas Francis, David W. Griffiths, Reese Griffiths, James Harper, Frank Harmer, Alfred D. Harris, John Harrison, Richard T. Havard, Joseph Hoffman, Samuel House, Evan Jones, John Jones, James Jones, Benjamin Hodgson, William C. Jones, William J. Jones, John A. Kennedy, William Knuckey, William King, Ernest Lewis, Gomer Lewis, Michael McHale, Patrick McHale, George W. Mackie, Thomas J. Matthews, Thomas M. Morgan, Ralph Oliver, Robert J. Owens, William Parry, William E. Phillips, Reese B. Powell, David Reese, John J. Reese, Robert Reid, John Richards, Edward Roberts, Robert L. Roberts, Charles Szurna, Joshua Taylor, Samuel A. Thomas, Spencer Thomas, Robert N. Walker, William J. Walters, Fred Whatley, David Williams, Griff Williams, Robert E. Williams, William Williams, Scranton; Alfred Bright, Michael R. Budash, Samuel Dawe, Llewellyn J. Evans, Throop; David Eynon, John Oakey, Benjamin Watkins, Dickson City; John Fox, Thomas O'Hara, William H. Powell, John C. Toole, Minooka; George Hollenbeck, Thomas B. James, George J. Kinzel, William Morris, Taylor; Steve Thomas Macko, Wilbur A. Stevens, Dunmore; David J. Thomas, Blakely; William Vessie, Olyphant; Andrew Brown, Pittston.

ASSISTANT MINE FOREMEN

Edwin Beecham, David C. Brown, David J. Davies, Thomas X. Davis, William T. Davies, Evan W. Evans, John H. Harvey, Frank Honck, Arthur Jones, John L. Jones, Benjamin Kondrasky, Edward Lewis, James Littlejohn, Henry Lumley, John Ludwidowski, James A. McNamara, John F. Masterson, David T. Morgan, Evan D. Morris, Thomas C. Parry, Anthony Pender, William Evan Rees, John Warren, William T. Williams, Garrett Wren, Scranton; Ralph Atkinson, Throop; William Fitzgerald, Leo H. Winters, Olyphant; John Halpin, Dunmore; Stephen Jordan, Taylor; Benjamin Maschal, Greenwood; Nathan Thomas, Dickson City.



FIFTH DISTRICT

LACKAWANNA AND LUZERNE COUNTIES

Rendham, Pa., February 21, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir:—I have the honor to transmit herewith my report as Inspector of Mines for the Fifth Anthracite District, for the year ending December 31, 1915, as required by the Act of April 14, 1903.

Respectfully submitted,

AUGUSTUS McDADE,
Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 10 |
| Number of mines, | 31 |
| Number of mines in operation, | 30 |
| Number of tons of coal shipped to market, | 2,819,619 |
| Number of tons used at mines for steam and heat, | 259,026 |
| Number of tons sold to local trade and used by employes, | 43,548 |
| Number of tons produced, | 3,122,193 |
| Number of tons produced by compressed air machines, | |
| Number of tons produced by electrical machines, | |
| Number of persons employed inside of mines, | 5,120 |
| Number of persons employed outside, | 1,521 |
| Number of fatal accidents inside of mines, | 15 |
| Number of fatal accidents outside, | |
| Number of non-fatal accidents inside of mines, | 41 |
| Number of non-fatal accidents outside, | |
| Number of tons of coal produced per fatal accident inside, | 208,146 |
| Number of tons produced per fatal accident outside, | |
| Number of tons produced per fatal accident inside and outside, | 208,146 |
| Number of persons employed per fatal accident inside, | 341 |
| Number of persons employed per fatal accident outside, | |
| Number of persons employed per fatal accident inside and outside, | 443 |
| Number of persons employed per non-fatal accident inside, | 125 |
| Number of persons employed per non-fatal accident outside, | |
| Number of persons employed per non-fatal accident inside and outside, | 162 |
| Number of wives made widows, | 11 |
| Number of children made orphans, | 16 |
| Number of steam locomotives used inside of mines, | |
| Number of steam locomotives used outside, | 9 |
| Number of compressed air locomotives used inside, | |
| Number of compressed air locomotives used outside, | |
| Number of electric motors used inside, | 70 |
| Number of electric motors used outside, | |
| Number of gasoline locomotives used inside, | |
| Number of fans in use, | 20 |
| Number of furnaces in use, | |
| Number of gaseous mines in operation, | 16 |
| Number of non-gaseous mines in operation, | 14 |
| Number of new mines opened, | |
| Number of old mines abandoned, | 4 |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|--|------------------|
| Pennsylvania Coal Company, | 1,306,342 |
| Delaware, Lackawanna and Western Railroad Company, | 1,051,019 |
| Jermyn and Company, | 449,995 |
| Hudson Coal Company, | 147,211 |
| Hillside Coal and Iron Company, | 146,935 |
| Lehigh Valley Coal Company, | 20,661 |
| Total, | <u>3,122,193</u> |

Production by Counties

| | |
|-------------------|------------------|
| Lackawanna, | 2,288,202 |
| Luzerne, | <u>833,991</u> |
| Total, | <u>3,122,193</u> |

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|--|-----------------|---------|--------|---------------------|---------|--------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Total | Outside | Inside | Total | Outside | Inside | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| Pennsylvania Coal Co., | 8 | ..... | ..... | 4 | ..... | 4 | 163,293 | 326,586 | 2,015 | 710 | 2,755 | 256 | ..... | 511 | ..... |
| Delaware, Lackawanna and Western Railroad Co., | 5 | ..... | ..... | 18 | ..... | 18 | 210,264 | 58,390 | 1,835 | 416 | 2,251 | 367 | ..... | 102 | ..... |
| Jermyn and Co., ..... | ..... | ..... | ..... | 11 | ..... | 11 | ..... | 40,909 | 685 | 290 | 885 | ..... | ..... | 62 | ..... |
| Hudson Coal Co., ..... | ..... | ..... | ..... | 6 | ..... | 6 | 117,241 | 24,540 | 251 | 81 | 335 | 251 | ..... | 42 | ..... |
| Hillside Coal and Iron Co., | 1 | ..... | ..... | ..... | ..... | ..... | 136,945 | 72,468 | 265 | 105 | 370 | 265 | ..... | 133 | ..... |
| Miscellaneous Companies, | 1 | ..... | ..... | 2 | ..... | 2 | ..... | ..... | 39 | 6 | 45 | ..... | ..... | ..... | ..... |
| Totals and averages, | 15 | ..... | 41 | 41 | ..... | 41 | 498,146 | 76,151 | 5,129 | 1,521 | 6,641 | 341 | ..... | 125 | ..... |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

[illegible]

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

[illegible]

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-----------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Welsh. | 1 | | | | | | | 1 | | | | | 1 |
| Irish. | | | | | | | | 1 | | | | | 1 |
| German. | | | 1 | | 1 | 1 | | | 1 | | | | 3 |
| Polish. | | | 1 | 1 | | | | | 1 | | | | 3 |
| Italian. | | | | | | | 1 | | | | | | 1 |
| Slavonian. | | | | 1 | | | | 1 | | | | | 2 |
| Austrian. | | | | | | | | 1 | | | | | 1 |
| Russian. | | | | | | | | | | | | | |
| Totals. | 1 | | 2 | 2 | 2 | 1 | 1 | 4 | 2 | | | | 15 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American. | | 4 | 1 | 1 | | 2 | | 2 | 1 | 1 | 1 | 3 | 13 |
| English. | | | | | | | | | | | 1 | | 1 |
| Welsh. | | | | | | | | | | | | | 1 |
| Polish. | 1 | | 1 | 1 | | 1 | 1 | | 2 | | 4 | 2 | 15 |
| Italian. | | | | | | | | 1 | 1 | 1 | 1 | | 4 |
| Slavonian. | | | 1 | | | | | | | | | | 1 |
| Lithuanian. | | 1 | | | | | | 1 | | | | | 2 |
| Russian. | | 1 | | | | | | | 1 | | | | 2 |
| Totals. | 1 | 6 | 4 | 2 | | 3 | 1 | 4 | 5 | 2 | 7 | 5 | 41 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|--|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|-------------|-------------|----------------------------------|---|--|--|-----------------------------------|
| Pennsylvania Coal Co. | | | | | | | | | | | | | | | |
| Old Forge Colliery: | | | | | | | | | | | | | | | |
| Old Forge No. 1 | Shaft | Non-gas | Fan | 20 | 6.6 | 5.5 | 52 | .9 | Galbal | Steam | 5 | 66,500 | 62,000 | 69,900 | 222 |
| Old Forge No. 2 | Slope | Non-gas | Fan | 20 | 6.6 | 5.5 | 55 | 1 | Galbal | Electricity | 4 | 80,490 | 72,195 | 90,590 | 135 |
| Old Forge No. 3 | Shaft | Non-gas | Fan | 20 | 6.6 | 5.5 | 59 | 1 | Galbal | Electricity | 10 | 124,380 | 106,085 | 133,465 | 571 |
| Mountain Quarry | Drift | Non-gas | Fan | 14 | 4 | 4 | 70 | .5 | Galbal | Electricity | 3 | 35,615 | 32,720 | 36,800 | 84 |
| Coray's Central Colliery: | | | | | | | | | | | | | | | |
| Law's | Slope | Gaseous | Fan | 20 | 6.6 | 5.5 | 50 | 1.5 | Galbal | Steam | 7 | 93,410 | 84,480 | 106,850 | 199 |
| Law's | Slope | Gaseous | Fan | 20 | 6.6 | 5.5 | 60 | .6 | Galbal | Steam | 2 | 33,400 | 31,000 | 35,611 | 76 |
| Number 13 | Shaft | Gaseous | Fan | 20 | 6.6 | 5.5 | 70 | 1.5 | Galbal | Steam | 13 | 127,925 | 123,200 | 133,975 | 534 |
| Sibley Colliery: | | | | | | | | | | | | | | | |
| Sibley | Shaft | Non-gas | Fan | 20 | 6 | 5 | 70 | 1.5 | Galbal | Steam | 13 | 127,925 | 123,200 | 133,975 | 534 |
| Delaware, Lackawanna and Western Railroad Co. | | | | | | | | | | | | | | | |
| Taylor Colliery: | | | | | | | | | | | | | | | |
| Taylor | Slope | Gaseous | Fan | 25 | 8 | 7 | 50 | 1 | Galbal | Steam | 12 | 269,988 | 218,060 | 301,920 | 758 |
| Pine Colliery: | | | | | | | | | | | | | | | |
| Pine | Shaft | Gaseous | Fan | 16 | 5 | 4.5 | 90 | .9 | Galbal | Steam | 3 | 30,400 | 20,200 | 32,800 | 771 |
| Pine | Slope | Gaseous | Fan | 24 | 8 | 6 | 72 | 1.9 | Galbal | Steam | 8 | 182,300 | 156,400 | 224,000 | 771 |
| Halstead Colliery: | | | | | | | | | | | | | | | |
| Halstead | Slope | Gaseous | Fan | 18 | 4 | 6.4 | 105 | 1.3 | Galbal | Steam | 8 | 102,927 | 96,010 | 118,290 | 736 |
| Halstead | Drift | Gaseous | Fan | 12 | 3.6 | 3 | 85 | .6 | Galbal | Steam | 4 | 32,456 | 25,000 | 36,400 | 736 |

| Ternyn and Co. | | | | | | | | | | | | | | |
|----------------------------|--------|----------|----------|----|-----|-----|-----|-----|---------|--------------|---|---------|---|---------|
| Ternyn Colliery: | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Jernyn No. 1. | Shaft. | Gascons. | Fan. | 14 | 4.5 | 4 | 90 | 1.1 | Guibal. | Steam. | 5 | 95,800 | * | 117,900 |
| Jernyn No. 1. | Slope. | Gascons. | Fan. | 18 | 4.3 | 6 | 90 | 1 | Guibal. | Steam. | 5 | 103,600 | * | 123,300 |
| Jernyn No. 2. | Shaft. | Gascons. | Fan. | 18 | 4.5 | 4 | 53 | .8 | Guibal. | Steam. | 3 | 70,000 | * | 105,000 |
| Jernyn No. 3. | Slope. | Gascons. | Fan. | 10 | 4 | 3.2 | 84 | .3 | Guibal. | Steam. | 1 | 21,600 | * | 28,000 |
| Hudson Coal Co. | | | | | | | | | | | | | | |
| Langcliffe Colliery: | | | | | | | | | | | | | | |
| Langcliffe No. 1. | Shaft. | Non-gas. | Fan. | 17 | 5 | 6 | 60 | .4 | Guibal. | Steam. | 3 | 43,200 | | 48,450 |
| Langcliffe No. 1. | Slope. | Non-gas. | | | | | | | | | | | | |
| Langcliffe No. 2. | Drift. | Non-gas. | | | | | | | | | | | | |
| Langcliffe No. 3. | Drift. | Non-gas. | | | | | | | | | | | | |
| Mooste. | Shaft. | Gascons. | Fan. | 19 | | | 90 | .2 | Guibal. | Steam. | 2 | 34,500 | | 40,375 |
| Hillside Coal and Iron Co. | | | | | | | | | | | | | | |
| Consolidated Colliery: | | | | | | | | | | | | | | |
| Consolidated. | Slope. | Non-gas. | Fan. | 14 | 4 | 4 | 85 | .6 | Guibal. | Steam. | 3 | 28,300 | | 58,700 |
| Consolidated. | Drift. | Non-gas. | Natural. | | | | | | | | 1 | 7,500 | | 9,575 |
| Lehigh Valley Coal Co. | | | | | | | | | | | | | | |
| Austin Colliery: | Drift. | Non-gas. | Fan. | 8 | 3 | 2 | 120 | .3 | Guibal. | Electricity. | 1 | 15,900 | | 18,100 |

Joining Villages

†-Abgeschlossen.

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|---|---|--|---|---|--|-----------------------------|
| Pennsylvania Coal Co. Old Forge, Central, Sibley, | Lackawanna, Luzerne, Lackawanna, | Joseph P. Jennings, .. | Scranton, | { Floyd Wilcox, Patrick H. O'Brien, Floyd Wilcox, } | { Moosic, Avoca, Moosic, } | Erie |
| Delaware, Lackawanna and Western Railroad Co. Taylor, Tyne, Hazard, Taylor Washery, | Lackawanna, Lackawanna, Luzerne, Lackawanna, | { C. E. Toley, } | Scranton, | { David Lloyd, T. J. Williams, David Lloyd, David Lloyd, } | Scranton, | D. L. and W. |
| Jermyn and Co. Jermyn, Hudson Coal Co. Langcliffe, | Lackawanna, .. Luzerne, | E. B. Jermyn, { Charles Dorrance, Jr., Outside, E. R. Pettibone, In- side, } | Scranton, Scranton, Dorrancton, | John P. Corcoran, James W. Boyd, } | Rendham, Scranton, | Erie Delaware and Hudson |
| Hillside Coal and Iron Co. Consolidated, Lehigh Valley Coal Co. Austin, | Luzerne, Lackawanna, .. Lackawanna, .. | Joseph P. Jennings, F. M. Chase, | Scranton, Wilkes-Barre, | John B. Jones, Thomas Thomas, | Avoca, Wilkes-Barre, | Erie Lehigh Valley |
| Moosic Mountain Coal Co. Moosic, * | Lackawanna, .. | John F. Cotter, | Wyoming, ..... | ..... | ..... | Erie |

*Idle.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | EXPLOSIVES | | | Number of horses and mules |
|---|---------------------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Pennsylvania Coal Co. Old Forge, Central, Sibley, Totals, | Lackawanna, | 682,738 | 60,107 | ..... | 742,845 | 295 | 1,285 | 1 | 4 | 575,000 | 50 | 24,250 | 4 |
| | Luzerne, | 341,312 | 33,715 | 132 | 375,169 | 556 | 756 | 1 | ..... | 334,375 | 13,000 | 4,500 | 26 |
| | Lackawanna, | 149,000 | 22,592 | 6,736 | 188,328 | 558 | 714 | 6 | ..... | 340,625 | 13,135 | 55,225 | 57 |
| | Totals, | 1,173,050 | 126,414 | 6,878 | 1,306,342 | ..... | 2,755 | 8 | 4 | 1,250,000 | 13,175 | 83,975 | 97 |
| Delaware, Lackawanna and Western Railroad Co. Taylor, Pine, Hadstead, Totals, | Lackawanna, | 458,255 | 16,958 | 8,328 | 483,541 | 295 | 904 | 5 | 4 | 418,200 | 10,327 | 105 | 25 |
| | Lackawanna, | 378,262 | 18,766 | 1,962 | 378,932 | 218 | 862 | ..... | 10 | 29,250 | 16,460 | ..... | 73 |
| | Luzerne, | 139,714 | 22,179 | 2,733 | 164,636 | 228 | 473 | ..... | 4 | 136,350 | 57,052 | ..... | 75 |
| | Taylor Washery, | 956,252 | 57,903 | 12,993 | 1,027,148 | ..... | 2,279 | 5 | 18 | 852,700 | 74,354 | 105 | 173 |
| Jermyu and Co. Totals, | Lackawanna, | 23,871 | 57,995 | 12,993 | 23,871 | 192 | 12 | ..... | ..... | ..... | ..... | ..... | ..... |
| | Totals, | 980,123 | ..... | 12,993 | 1,051,019 | ..... | 2,251 | 5 | 18 | 882,700 | 74,354 | 105 | 173 |
| Hudson Coal Co. Langcliffe, | Lackawanna, | 394,452 | 42,850 | 12,693 | 449,995 | 217 | 885 | ..... | 11 | 387,500 | 6,380 | ..... | 73 |
| | Luzerne, | 131,500 | 12,526 | 3,125 | 147,241 | 181 | 355 | 1 | 6 | 112,400 | 3,313 | ..... | 68 |

TABLE 2.—Continued

| Names of Operators and Collieries | County | EXPLOSIVES | | | Number of horses and mules | |
|--|------------------|--|-----------------------------------|---------------------------------|----------------------------|-----|
| | | Number of pounds of permissible explosives used | Number of pounds of dynamite used | Number of pounds of powder used | | |
| Hillside Coal and Iron Co. Consolidated. | Luzerne, | 11,000 | ..... | 176,250 | 2 | 34 |
| Lehigh Valley Coal Co. Austin. | Lackawanna, .... | ..... | 200 | 9,250 | ..... | 11 |
| Grand totals. | ..... | ..... | 97,422 | 2,788,100 | 41 | 456 |
| | | Number of non-fatal accidents | | | | |
| | | Number of fatal accidents | | | | |
| | | Number of employees | | | | |
| | | Number of days worked | | | | |
| | | Total production of coal in tons | | | | |
| | | Number of tons sold to local trade and used by employees | | | | |
| | | Number of tons used at collieries for steam and heat | | | | |
| | | Number of tons of coal shipped to market | | | | |

*Coal prepared at William A. breaker, Eighth District.

TABLE 3.—Number of each class of employes inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | | Outside | | | | | | | | Grand total | |
|--|-------------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|--------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|--------------------|-------------|---------------|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employes | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | Bookkeepers and clerks | All other employes | | Total outside |
| Pennsylvania Coal Co., ... | { Lackawanna, } | 5 | 16 | .... | 782 | 727 | 62 | 53 | 13 | 221 | 166 | 2,045 | 2 | 3 | 44 | 52 | 167 | 41 | 5 | 396 | 710 | 2,755 |
| Delaware Lackawanna and Western Railroad Co., .. | { Luzerne, } | 4 | 3 | 15 | 555 | 664 | 123 | 29 | 20 | 125 | 297 | 1,935 | .... | 6 | 20 | 44 | 115 | 4 | 11 | 216 | 416 | 2,251 |
| Jermyn and Co., .. | { Lackawanna, } | 2 | 2 | 14 | 243 | 248 | 40 | 27 | 7 | 102 | .... | 685 | 2 | 1 | 11 | 18 | 35 | 32 | 7 | 94 | 200 | 885 |
| Hudson Coal Co., .. | { Lackawanna, } | 1 | 1 | 1 | 76 | 119 | 33 | .... | 2 | 16 | .... | 251 | .... | 1 | 7 | 15 | 12 | 10 | 2 | 37 | 84 | 335 |
| Hillside Coal and Iron Co., .. | { Luzerne, } | 1 | 1 | .... | 118 | 196 | 20 | 3 | .... | 2 | 24 | 265 | 1 | 1 | 6 | 10 | 23 | 2 | .... | 57 | 105 | 370 |
| Lehigh Valley Coal Co., .. | { Luzerne, } | 1 | .... | .... | 12 | 12 | 5 | .... | 1 | 8 | .... | 39 | .... | .... | 2 | .... | .... | .... | .... | 4 | 6 | 45 |
| Totals, ..... | ..... | 14 | 23 | 30 | 1,786 | 1,866 | 283 | 112 | 43 | 474 | 489 | 5,120 | 5 | 12 | 90 | 139 | 357 | 89 | 25 | 894 | 1,521 | 6,641 |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|-------|----------------------------|----------------|--------------------|-----|-------------------|------------------|-------------------|---------------------|----------------|---|
| Jan. | 26 David E. Davis, | Welsh, | Miner, | 59 | M. | 1 | 1 | Taylor, | Lackawanna, | Killed by fall of roof at face of chamber, |
| March | 5 James Taberco, | Italian, | Miner, | 50 | M. | 1 | 1 | Sibley, | Lackawanna, | Killed by explosion of blast at face of gangway. |
| April | 11 Stanley Mirovica, | Polish, | Miner, | 50 | M. | 1 | 4 | Sibley, | Lackawanna, | Killed by fall of roof on pillar work. |
| | 6 Jessie Bovesto, | Italian, | Miner, | 42 | M. | 1 | 1 | Old Forge, | Lackawanna, | Killed by fall of roof at face of chamber. |
| May | 26 John Collick, | Russian, | Miner, | 56 | M. | 1 | 1 | Taylor, | Lackawanna, | Killed by fall of roof at face of chamber. |
| | 4 Alex Makosky, | Polish, | Miner, | 28 | M. | 1 | 1 | Sibley, | Lackawanna, | Killed by fall of roof on pillar work. |
| June | 19 John Kramer, | German, | Miner, | 50 | M. | 1 | 1 | Langcliffe, | Luzerne, | Killed by fall of roof on gangway. |
| | 17 Frank Sargulsky, | Polish, | Miner, | 28 | S. | 1 | 1 | Sibley, | Lackawanna, | Killed by fall of roof on pillar work. |
| July | 31 George Corbridge, | Slavonian, .. | Miner, | 29 | M. | 1 | 1 | Taylor, | Lackawanna, | Killed by fall of roof on pillar work. |
| Aug. | 12 Andrew Lockak, | Austrian, .. | Miner, | 51 | M. | 1 | 1 | Consolidated, | Luzerne, | Killed by fall of roof on pillar work. |
| | 7 Thomas Morphy, | Irish, | Miner, | 33 | M. | 1 | 1 | Taylor, | Lackawanna, | Fatally injured by mining machine at face of chamber. |
| | 17 Joseph Morosick, | Russian, .. | Machine runner, .. | 33 | M. | 1 | 1 | Taylor, | Lackawanna, | Fatally injured by mining machine at face of chamber. |
| | 27 John Pasco, | Polish, | Miner, | 32 | S. | 1 | 1 | Sibley, | Lackawanna, | Fatally injured by explosion of powder that he was carrying in chamber. |
| Sept. | 8 Andrew Zalomecky, .. | Slavonian, .. | Miner, | 32 | M. | 1 | 1 | Taylor, | Lackawanna, | Killed by fall of roof at face of chamber. |
| | 23 Henry Kayschenski, .. | Polish, | Miner, | 32 | M. | 1 | 1 | Central, | Luzerne, | Killed by fall of roof on pillar work. |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or Single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|------------------------|------------------|--------------------|-------|-------------------|---------------------|-------------------|--|
| Jan. 15 | Robert Buyak, | Polish, | Driver, | 19 S. | | Langeliffe, | Luzerne, | Ribs fractured between cars and roof on plane. |
| Feb. 7 | John Moscow, | Polish, | Company man, | 52 M. | | Taylor, | Lackawanna, | Leg fractured by cars in chamber. |
| 10 | Joseph Whitehouse, .. | American, | Brakeman, | 19 S. | | Pyne, | Lackawanna, | Thigh fractured by cars on gangway. |
| 12 | Alexander Clitcock, .. | Polish, | Miner, | 22 S. | | Consolidated, | Luzerne, | Leg fractured by explosion of blast at face of chamber. |
| 13 | Toney Venanzio, | Italian, | Laborer, | 21 S. | | Jermyn, | Lackawanna, | Arm fractured by fall of roof at face of chamber. |
| 19 | Joseph Falbo, | Italian, | Miner, | 42 M. | | Jermyn, | Lackawanna, | Head bruised by explosion of blast at face of chamber. |
| | James Bridge, | Italian, | Laborer, | 21 S. | | Jermyn, | Lackawanna, | Head bruised by explosion of blast at face of chamber. |
| 23 | Phillip Zellman, | Russian, | Miner, | 42 M. | | Jermyn, | Lackawanna, | Leg fractured by fall of roof at face of chamber. |
| March 16 | Mike Risk, | Polish, | Laborer, | 30 M. | | Taylor, | Lackawanna, | Leg fractured by piece of rock that slid from roof in chamber. |
| | George Cresaro, | Slavonian, | Laborer, | 31 M. | | Consolidated, | Luzerne, | Leg fractured by fall of roof at face of chamber. |
| 26 | John Owens, | Welsh, | Mason, | 45 M. | | Halstead, | Luzerne, | Arm fractured by explosion of blast at face of chamber. |
| 29 | John Joyce, | American, | Brakeman, | 21 S. | | Old Forge, | Lackawanna, | Leg fractured by cars on gangway. |
| April 13 | John Muzarik, | Polish, | Miner, | 39 M. | | Halstead, | Luzerne, | Head bruised by explosion of blast at face of chamber. |
| 16 | John Lee, | American, | Driver, | 26 S. | | Jermyn, | Lackawanna, | Finger cut off by cars on gangway. |
| June 1 | William Legz, | American, | Brakeman, | 19 S. | | Old Forge, | Lackawanna, | Thigh and knee fractured by fall of roof at face of chamber. |
| 11 | Albert Kosko, | Polish, | Miner, | 46 M. | | Langeliffe, | Luzerne, | Leg fractured by fall of roof at face of chamber. |
| 17 | Alx Von Berger, | American, | Miner, | 45 S. | | Pyne, | Lackawanna, | Leg fractured by fall of roof at face of chamber. |
| July 15 | John Coyal, | Polish, | Miner, | 26 S. | | Langeliffe, | Luzerne, | Leg fractured by fall of coal at face of chamber. |
| Aug. 9 | Christy Gnozz, | Italian, | Brakeman, | 13 S. | | Jermyn, | Lackawanna, | Ribs fractured by being struck by rope on gangway. |
| 11 | George Bollinsky, | American, | Driver, | 18 S. | | Halstead, | Luzerne, | Arm fractured by cars on gangway. |
| 21 | Frank Delaney, | American, | Company man, | 48 M. | | Halstead, | Luzerne, | Leg fractured by being struck by rope on slope. |

TABLE 5. —Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|------------------------|-------------------|-------------------|-------|-------------------|-------------------|----------------|--|
| Aug. 31 | Mike Sursmark, | Lithuanian, | Laborer, | 38 M. | | Taylor, | Lackawanna, | Rib fractured by fall of roof at face of chamber. |
| Sept. 4 | James S. Evans, | American, | Miner, | 42 M. | | Taylor, | Lackawanna, | Face fractured by fall of roof at face of chamber. |
| 15 | John Sulsoek, | Polish, | Laborer, | 38 M. | | Pyne, | Lackawanna, | Face and hands burned by explosion of powder on gangway. |
| 16 | George Mickolins, .. | Polish, | Miner, | 27 S. | | Langcliffe, | Luzerne, | Arm fractured by fall of roof at face of chamber. |
| 21 | Stanley Casterline, .. | Italian, | Rope rider, | 21 M. | | Jermyn, | Lackawanna, | Collar bone fractured by cars on gangway. |
| 30 | John Rosino, | Russian, | Miner, | 38 M. | | Jermyn, | Lackawanna, | Spine dislocated by fall of roof on pillar work. |
| Oct. 14 | John Gardner, | American, | Miner, | 39 M. | | Old Forge, | Lackawanna, | Ankles fractured by fall of coal at face of chamber. |
| 30 | Toney Dofleck, | Italian, | Laborer, | 33 M. | | Jermyn, | Lackawanna, | Leg and skull fractured by fall of roof at face of chamber. |
| Nov. 5 | Edward Harrison, | English, | Moorman, | 19 S. | | Old Forge, | Lackawanna, | Leg fractured by cars on gangway. |
| 11 | Michael O'Hoppe, | Polish, | Miner, | 54 M. | | Langcliffe, | Luzerne, | Leg fractured by fall of coal at face of chamber. |
| 17 | Walter Casco, | Polish, | Laborer, | 28 S. | | Pyne, | Lackawanna, | Leg fractured by fall of roof at face of chamber. |
| 20 | David Thomas, | American, | Miner, | 28 M. | | Pyne, | Lackawanna, | Ankle fractured by fall of roof at face of chamber. |
| 24 | Toney Scoff, | Italian, | Miner, | 47 M. | | Jermyn, | Lackawanna, | Leg fractured by piece of rock that slid from goaf in chamber. |
| 26 | Andrew Biski, | Polish, | Laborer, | 28 S. | | Pyne, | Lackawanna, | Leg fractured by fall of roof at face of chamber. |
| | Stephen Shoutack, | Polish, | Laborer, | 42 M. | | Langcliffe, | Luzerne, | Ankle fractured by fall of roof at face of chamber. |
| 7 | Andrew Rollinick, | Polish, | Miner, | 32 M. | | Jermyn, | Lackawanna, | Spine dislocated by fall of roof at face of chamber. |
| 9 | William Kerr, | American, | Prakeman, | 24 S. | | Pyne, | Lackawanna, | Foot fractured by cars on slope. |
| 16 | John Balla, | Polish, | Miner, | 44 M. | | Pyne, | Lackawanna, | Back bruised by fall of coal at face of chamber. |
| 29 | Scott B. Corey, | American, | Miner, | 67 M. | | Pyne, | Lackawanna, | Scalp lacerated by fall of coal at face of chamber. |
| 30 | Robert Coombs, | American, | Miner, | 43 M. | | Pyne, | Lackawanna, | Spine fractured by fall of roof at face of chamber. |

CONDITION OF COLLIERIES

PENNSYLVANIA COAL COMPANY

Old Forge, Central and Sibley Collieries.—Ventilation, drainage and condition as to safety, good. Pillars are being mined.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Taylor and Pyne Collieries.—Ventilation, drainage and condition as to safety, good. Pillars are being mined.

Halstead Colliery.—Ventilation, drainage and condition as to safety, fair. Pillars are being mined.

JERMYN AND COMPANY

Jermyn Colliery.—Ventilation, drainage and condition as to safety, good. Mining pillars extensively.

HUDSON COAL COMPANY

Langcliffe Colliery.—Ventilation, drainage and condition as to safety, good. Pillars are being mined.

HILLSIDE COAL AND IRON COMPANY

Consolidated Colliery.—Ventilation, drainage and condition as to safety, good. Mining pillars.

LEHIGH VALLEY COAL COMPANY

Austin Colliery.—Ventilation, drainage and condition as to safety, good. Mining pillars exclusively.

MOOSIC COAL COMPANY

Moosic Colliery.—Idle the entire year.

IMPROVEMENTS

PENNSYLVANIA COAL COMPANY

Old Forge Colliery.—Two mixed pressure turbines were installed in Old Forge power house to provide additional electrical power.

A slope was sunk from surface to Clark vein near Old Forge No. 2 shaft, and engines etc., were installed in order to facilitate transportation.

Central Colliery.—A rock tunnel was driven from the top split of the Red Ash vein to the top split of the Red Ash vein in Law shaft.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Halstead Colliery.—Slope was driven from surface to Marcy vein for haulage purposes. Open Marcy vein to increase output. Made second opening to Marcy vein for ventilating purposes. Recribbed Feeder Dam shaft.

JERMYN AND COMPANY

Jermyn Colliery.—Sunk No. 3 shaft from No. 2 Dunmore vein to No. 3 Dunmore vein. A drift was driven from surface to bottom split of the big vein. An electric pump was installed in the second Dunmore vein.

Outside: An air compressor was installed near No. 3 shaft.

HUDSON COAL COMPANY

Langcliffe Colliery.—Outside: Breaker was remodeled to a considerable extent.

HILLSIDE COAL AND IRON COMPANY

Consolidated Colliery.—An air shaft was sunk from the surface to the top split of the Stark vein at Consolidated drift. This shaft also provides a second opening.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in the High School, Old Forge, May 18 and 19. The Board of Examiners was composed of Augustus McDade, Inspector, Rendham; David Lloyd, Superintendent, Scranton; Morgan E. Griffiths, Miner, Taylor; Michael Cosgrove, Miner, Old Forge.

The following persons passed a satisfactory examination and were granted certificates:

MINE FOREMEN

John N. Cooke, James McGinley, William C. Riddle, Bernard Boyle, David E. Davis, John J. Boyle, Thomas Phillips, John Rohland, John Digwood, William W. Powell, James Walsh, Louis Tedesco, William G. Gwyn, Old Forge; John Scriven, John Withey, William W. Jones, Gounod Evans, Thomas V. Reynolds, Grover Perry, Martin Carroll, Thomas H. Griffiths, Thomas W. Jones, Daniel Hayes, David J. Thomas, John J. Jarret, Enoch Williams, Charles J. Powell, Alex. G. Law, David Moses, William H. Powell, David E. Harris, Robert J. Jacobs, Thomas G. Townsend, George E. Williams, William G. Lewis, Peter E. Partington, Benjamin Sweetman, Thomas Daniels, George S. Goodwin, Taylor; James Kelley, John W. Clifford, Cornelius McLaughlin, Avoca; William Creeden, Frank Baxter, James Baxter, John M. Reid, Moosie; Michael Joseph, Cosgrove; Martin Durkin, John E. Jones, Barney O'Boyle, William Richards, Thomas Wylam, Rendham; Theodore P. Hartman, Charles Cooksey, John M.

O'Boyle, Michael J. Gilroy, Thomas B. Roberts, David J. Powell, Scranton; William T. Davis, Dorranceton; Robert A. Evans, West Pittston.

ASSISTANT MINE FOREMEN

Hugh Dove, Frank Pointon, William J. Fallon, John J. Davis, Patrick F. Fallon, Lawrence Walsh, Old Forge; Walter George Tibbs, Rendham; William Edwards, Scranton; Fred. Kramer, Duryea.



SIXTH DISTRICT

LUZERNE COUNTY

Pittston, Pa., February 15, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir:—I have the honor to transmit herewith my report as Inspector of Mines for the Sixth Anthracite District for the year ending December 31, 1915.

Respectfully submitted,

H. McDONALD.

Inspector.

SUMMARY OF STATISTICS

| | |
|--|-----------|
| Number of collieries, | 16 |
| Number of mines, | 47 |
| Number of mines in operation, | 47 |
| Number of tons of coal shipped to market, | 4,814,548 |
| Number of tons used at mines for steam and heat, | 453,112 |
| Number of tons sold to local trade and used by employes, | 57,707 |
| Number of tons produced, | 5,325 367 |
| Number of tons produced by compressed air machines, .. | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 9,922 |
| Number of persons employed outside, | 2,600 |
| Number of fatal accidents inside of mines, | 45 |
| Number of fatal accidents outside, | 3 |
| Number of non-fatal accidents inside of mines, | 66 |
| Number of non-fatal accidents outside, | 10 |
| Number of tons of coal produced per fatal accident inside, | 118,341 |
| Number of tons produced per fatal accident outside, .. | 1,775,122 |
| Number of tons produced per fatal accident inside and outside, | 110,946 |
| Number of persons employed per fatal accident inside, .. | 221 |
| Number of persons employed per fatal accident outside, | 867 |
| Number of persons employed per fatal accident inside and outside, | 261 |
| Number of persons employed per non-fatal accident inside, | 150 |
| Number of persons employed per non-fatal accident out- side, | 260 |
| Number of persons employed per non-fatal accident inside and outside, | 165 |
| Number of wives made widows, | 31 |
| Number of children made orphans, | 87 |
| Number of steam locomotives used inside of mines, .... | ..... |
| Number of steam locomotives used outside, | 23 |
| Number of compressed air locomotives used inside, .... | ..... |
| Number of compressed air locomotives used outside, | 11 |
| Number of electric motors used inside, | 99 |
| Number of electric motors used outside, | 1 |
| Number of gasoline locomotives used inside, ..... | ..... |
| Number of fans in use, | 41 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 22 |
| Number of non-gaseous mines in operation, | 25 |
| Number of new mines opened, ..... | ..... |
| Number of old mines abandoned, ..... | ..... |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|---------------------------------------|-------------------------|
| Pennsylvania Coal Company, | 2,685,585 |
| Delaware and Hudson Company, | 1,014,589 |
| Hillside Coal and Iron Company, | 664,524 |
| Lehigh Valley Coal Company, | 530,059 |
| Traders Coal Company, | 197,535 |
| Wilkes-Barre Colliery Company, | 150,196 |
| Conlon Coal Company, | 49,581 |
| Central Coal Company, | 29,812 |
| McCauley Coal Company, | 3,486 |
| Total, | <u><u>5,325,367</u></u> |

Production by Counties

| | |
|----------------|-------------------------|
| Luzerne, | <u><u>5,325,367</u></u> |
|----------------|-------------------------|

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|-----------------------------------|-----------------|---------|-------|---------------------|---------|-------|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | |
| Pennsylvania Coal Co., | 31 | 3 | 34 | 29 | 1 | 30 | 127,885 | 5,011 | 1,287 | 6,298 | 279 | 429 | 173 | 1,257 |
| Delaware and Hudson Co., | 14 | ..... | 14 | 21 | 6 | 27 | 72,471 | 2,092 | 551 | 2,623 | 149 | ..... | 35 | 88 |
| Hillside Coal and Iron Co., | 3 | ..... | 3 | 1 | 3 | 4 | 132,965 | 1,198 | 386 | 1,584 | 399 | ..... | 249 | 129 |
| Lehigh Valley Coal Co., | 5 | ..... | 5 | 1 | ..... | 1 | 221,508 | 1,174 | 229 | 994 | 135 | ..... | 174 | ..... |
| Lehigh Valley Coal Co., | 1 | ..... | 1 | ..... | ..... | ..... | 539,659 | 412 | 78 | 491 | 413 | ..... | 31 | ..... |
| Wilkes-Barre Colliery Co., | 1 | ..... | 1 | 8 | ..... | 8 | 197,535 | 259 | 56 | 396 | 250 | ..... | 74 | ..... |
| Wilkes-Barre Colliery Co., | 1 | ..... | 1 | 1 | ..... | 1 | 18,775 | 74 | 11 | 85 | ..... | ..... | ..... | ..... |
| Canlon Coal Co., ..... | ..... | ..... | ..... | ..... | ..... | ..... | 49,581 | 119 | 31 | 141 | ..... | ..... | ..... | ..... |
| Miscellaneous Companies, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals and averages, | 45 | 3 | 48 | 66 | 10 | 76 | 80,087 | 9,922 | 2,600 | 12,522 | 221 | 807 | 150 | 250 |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mine

| | Month | | | | | | | | | | | | Totals | Percentages |
|---|----------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|-----------|---------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 8.89 |
| Falls of roof, | 3 | 2 | 2 | 3 | 4 | 4 | 2 | 2 | 1 | 1 | 2 | 1 | 26 | 11.41 |
| Mine cars, | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 9 | 20.00 |
| Explosions of powder and dynamite, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 1.11 |
| Blasts, premature and otherwise, | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 10 | 22.22 |
| Totals, | 6 | 5 | 3 | 7 | 5 | 3 | 1 | 4 | 4 | 4 | 2 | 5 | 45 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Caps, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 65.67 |
| Smothered by sand, .. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 65.67 |
| Totals, | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 24 | 100.00 |
| Grand totals inside and outside, | 8 | 7 | 5 | 9 | 7 | 5 | 3 | 6 | 6 | 6 | 4 | 7 | 69 | 100.00 |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|---------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 2.00 |
| Falls of roof, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 25.76 |
| Mine cars, | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 | 20.00 |
| Explosions of gas, | 2 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 | 15.45 |
| Explosions of powder and dynamite, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 6.00 |
| Blasts, premature and otherwise, | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 | 16.67 |
| Struck by rope, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 1.52 |
| Struck by piece of rock, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 1.51 |
| Totals, | 10 | 14 | 8 | 10 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 102 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 1.00 |
| Machinery, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 1.00 |
| Falling, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 20.00 |
| Struck by wagon, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 10.00 |
| Mules, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 10.00 |
| Struck by rope, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 | 10.00 |
| Totals, | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 72 | 100.00 |
| Grand totals inside and outside, | 16 | 20 | 14 | 16 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 174 | 100.00 |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, | 5 | 2 | 1 | 5 | 4 | 3 | ... | 4 | ... | 2 | 2 | 3 | 31 |
| Miners' laborers, | ... | 1 | 2 | 1 | 1 | ... | ... | 1 | ... | 2 | ... | 1 | 9 |
| Drivers and runners, | 1 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 |
| Doormen, | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Motormen, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Totals, | 6 | 5 | 3 | 7 | 5 | 3 | ... | 4 | 1 | 4 | 2 | 5 | 45 |
| Outside | | | | | | | | | | | | | |
| Drivers, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| Laborers, | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Headmen, | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Totals, | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 1 | ... | ... | 3 |
| Grand totals inside and outside, | 6 | 5 | 3 | 7 | 5 | 3 | ... | 4 | 3 | 5 | 2 | 5 | 48 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Assistant mine foremen, | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| Fire bosses and assistants, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Miners, | 1 | 2 | 5 | 1 | 1 | 3 | 3 | 1 | 5 | 1 | 3 | 5 | 31 |
| Miners' laborers, ..... | ..... | 4 | 1 | 2 | 4 | 1 | 1 | 3 | ..... | 1 | ..... | 5 | 22 |
| Drivers and runners, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... | ..... | 3 |
| Doorboys and helpers, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Motormen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | ..... | 2 |
| Rockmen, ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | ..... | 1 |
| Footmen, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Engineers, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 2 |
| Totals, | 3 | 7 | 6 | 5 | 6 | 5 | 6 | 5 | 7 | 2 | 4 | 10 | 66 |
| Outside | | | | | | | | | | | | | |
| Teamsters, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Statepickers (boys), ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | 3 |
| Engineers, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Headmen, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 2 |
| Laborers, | 1 | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3 |
| Totals, | 1 | 2 | ..... | 1 | 3 | ..... | ..... | ..... | 2 | ..... | ..... | 1 | 10 |
| Grand totals inside and outside, | 4 | 9 | 6 | 6 | 9 | 5 | 6 | 5 | 9 | 2 | 4 | 11 | 76 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American, | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| English, | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | 3 |
| Welsh, | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Irish, | ... | ... | ... | 1 | 1 | ... | ... | ... | 1 | ... | ... | ... | 3 |
| German, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 3 |
| Polish, | ... | 1 | 2 | 2 | 2 | 2 | ... | 4 | ... | 3 | 1 | 3 | 20 |
| Italian, | 1 | 2 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 7 |
| Slavonian, | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Lithuanian, | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 5 |
| Austrian, | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 3 |
| Russian, | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 3 |
| Totals, | 6 | 5 | 3 | 7 | 5 | 3 | ... | 4 | 2 | 5 | 2 | 5 | 48 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American, | 3 | 3 | 1 | ... | 3 | 2 | ... | 1 | 3 | ... | ... | ... | 16 |
| Irish, | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 3 |
| German, | ... | ... | ... | ... | 1 | ... | 1 | ... | 1 | ... | ... | ... | 3 |
| Polish, | ... | ... | 3 | 1 | 1 | 1 | 1 | 3 | ... | 1 | 3 | 4 | 20 |
| Italian, | ... | 1 | ... | ... | 1 | 1 | ... | ... | 1 | ... | ... | 5 | 13 |
| Slavonian, | 1 | ... | ... | 1 | 2 | ... | ... | ... | ... | ... | ... | ... | 4 |
| Lithuanian, | ... | 3 | 1 | ... | ... | ... | 1 | 1 | 3 | ... | ... | 1 | 10 |
| Austrian, | ... | ... | ... | 2 | ... | ... | ... | ... | 1 | ... | ... | 1 | 4 |
| Russian, | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | 1 | 1 | ... | 4 |
| Totals, | 4 | 9 | 6 | 6 | 9 | 5 | 6 | 5 | 9 | 2 | 4 | 11 | 76 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gascons or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Area of furnace bars in square feet | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|--|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|---------------|-----------------|-------------------------------------|----------------------------------|---|--|--|-----------------------------------|
| Pennsylvania Coal Co. Barium Colliery: Barium No. 2 | Shaft, | Gascons, .. | 2 Fans, { | 29 | 6.6 5.2 | 5.5 4.8 | 60 60 | .8 .5 | { Guibal, ... | Steam, | .. | 10 | 157,960 | 135,350 | 179,300 | 390 |
| | Shaft, ... | Gascons, .. | { Fan, ... | 29 | 6.6 | 5.5 | 60 | .8 | { Guibal, ... | Steam, | .. | 5 | 94,620 | 77,630 | 100,000 | 214 |
| | Shaft, ... | | { Fan, ... | 29 | 6.6 | 5.5 | 60 | 1.0 | | Steam, | .. | 4 | 55,600 | 42,850 | 68,800 | 116 |
| | Shaft, ... | | { Fan, ... | 29 | 6.6 | 5.5 | 62 | 1.1 | | Steam, | .. | 7 | 119,300 | 122,290 | 161,800 | 232 |
| | Shaft, ... | | { Fan, ... | 29 | 6.6 | 5.5 | 62 | 1.0 | | Steam, | .. | 9 | 125,000 | 95,700 | 133,163 | 258 |
| | Slope, ... | Gascons, .. | { Fan, ... | 10.2 | 4.5 | 2.8 | 72 | .5 | { Guibal, ... | Electricity, .. | .. | 2 | 32,800 | 24,710 | 36,600 | 29 |
| | Shaft, ... | | { Fan, ... | 30 | 6.6 | 5.5 | 68 | 1.1 | | Steam, | .. | 7 | 119,398 | 117,695 | 120,537 | 343 |
| | Shaft, ... | | { Fan, ... | 29 | 6.6 | 5.5 | 64 | 1.0 | | | .. | 10 | 111,610 | 100,240 | 121,230 | 345 |
| | Slope, ... | | { Fan, ... | 30 | 6.6 | 5.5 | 66 | .5 | | | .. | 3 | 37,200 | 32,300 | 53,000 | 131 |
| | Slope, ... | Gascons, .. | { Fan, ... | 29 | 6.6 | 5.5 | 72 | 1.3 | { Guibal, ... | Steam, | .. | 10 | 212,442 | 143,360 | 234,940 | 505 |
| | Drift, ... | | { Fans, ... | 17 | 5.0 | 4.0 | 70 | .8 | | Steam, | .. | 11 | 148,141 | 130,248 | 180,594 | 435 |
| | Slope, ... | | { Fan, ... | 20 | 6.6 | 5.5 | 65 | .5 | | Steam, | .. | 4 | 116,435 | 100,200 | 125,430 | 297 |
| | Slope, ... | | { Fan, ... | 20 | 6.6 | 5.5 | 64 | .9 | | Steam, | .. | 3 | 34,410 | 25,445 | 41,850 | 65 |
| Number 9 Colliery: Number 1, Number 8, Leadville, Number 10, Curds, Number 6 Colliery: Number 5, Number 6, Number 11, Wright, Number 14 Colliery: Number 11, Number 14, Cortright, Damon 1. | Shaft, ... | Gascons, .. | 2 Fans, { | 29 | 6.6 5.2 | 5.5 4.8 | 60 60 | .8 .5 | { Guibal, ... | Steam, | .. | 10 | 157,960 | 135,350 | 179,300 | 390 |
| | Shaft, ... | Gascons, .. | { Fan, ... | 29 | 6.6 | 5.5 | 60 | .8 | { Guibal, ... | Steam, | .. | 5 | 94,620 | 77,630 | 100,000 | 214 |
| | Shaft, ... | | { Fan, ... | 29 | 6.6 | 5.5 | 60 | 1.0 | | Steam, | .. | 4 | 55,600 | 42,850 | 68,800 | 116 |
| | Shaft, ... | | { Fan, ... | 29 | 6.6 | 5.5 | 62 | 1.1 | | Steam, | .. | 7 | 119,300 | 122,290 | 161,800 | 232 |
| | Shaft, ... | | { Fan, ... | 29 | 6.6 | 5.5 | 62 | 1.0 | | Steam, | .. | 9 | 125,000 | 95,700 | 133,163 | 258 |
| | Slope, ... | Gascons, .. | { Fan, ... | 10.2 | 4.5 | 2.8 | 72 | .5 | { Guibal, ... | Electricity, .. | .. | 2 | 32,800 | 24,710 | 36,600 | 29 |
| | Shaft, ... | | { Fan, ... | 30 | 6.6 | 5.5 | 68 | 1.1 | | Steam, | .. | 7 | 119,398 | 117,695 | 120,537 | 343 |
| | Shaft, ... | | { Fan, ... | 29 | 6.6 | 5.5 | 64 | 1.0 | | | .. | 10 | 111,610 | 100,240 | 121,230 | 345 |
| | Slope, ... | | { Fan, ... | 30 | 6.6 | 5.5 | 66 | .5 | | | .. | 3 | 37,200 | 32,300 | 53,000 | 131 |
| | Slope, ... | Gascons, .. | { Fan, ... | 29 | 6.6 | 5.5 | 72 | 1.3 | { Guibal, ... | Steam, | .. | 10 | 212,442 | 143,360 | 234,940 | 505 |
| | Drift, ... | | { Fans, ... | 17 | 5.0 | 4.0 | 70 | .8 | | Steam, | .. | 11 | 148,141 | 130,248 | 180,594 | 435 |
| | Slope, ... | | { Fan, ... | 20 | 6.6 | 5.5 | 65 | .5 | | Steam, | .. | 4 | 116,435 | 100,200 | 125,430 | 297 |
| | Slope, ... | | { Fan, ... | 20 | 6.6 | 5.5 | 64 | .9 | | Steam, | .. | 3 | 34,410 | 25,445 | 41,850 | 65 |

TABLE I.—Continued

| Names of Operators and Mines | Number of persons employed inside | 65 | 20 |
|--|--|--------------|-------|
| | Number of cubic feet of air per minute passing out at outlet | 20,000 | 7,610 |
| Total number of cubic feet of air per minute circulating in all the splits | 16,000 | 4,600 | |
| Number of cubic feet of air per minute entering the mine at inlet | 16,000 | 5,690 | |
| Number of splits of air currents | 1 | 1 | |
| Area of furnace bars in square feet | | | |
| Power used | Electricity.. | | |
| Name of fan | American Blower. | | |
| Water gauge developed—in inches | | | |
| Number of revolutions per minute | 90 | | |
| Depth of blades in feet and inches | 1.6 | | |
| Width of blades in feet and inches | 2.4 | | |
| Diameter of fan in feet and inches | 6 | | |
| Method of ventilation | Natural, } Fan, ... } Natural, } | Natural, .. | |
| Gaseous or non-gaseous | Non-gas, .. } Non-gas, .. } Non-gas, .. } | Non-gas, .. | |
| Kind of opening | { 2 Slopes, } { Tunnel, } { Drift, ... } | Orift, | |
| Central Coal Co. Wyoening Colliery: | | | |
| Wyoming, | | | |
| McCauley Coal Co. Pickaway Colliery: | | | |
| Pickaway, | | | |

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|---|---------------|--------------------------------|---------------------|--|--|----------------------------|
| Pennsylvania Coal Co. Barnum, Number 9, Numbers 6 and 14, Ewen, | Luzerne,..... | William P. Jennings. | Scranton, | { A. E. Yetter, A. E. Yetter, David Girvan, David Girvan, } | Pittston, Pittston, Pittston, Pittston, | Erie |
| Delaware and Hudson Co. Ladlin, Delaware, Pine Ridge, Butler, | Luzerne,..... | E. R. Pettebone, | Dorrancton, | Charles Dorrance, Jr., | Scranton, | Delaware and Hudson |
| Hillside Coal and Iron Co. Butler, | Luzerne,..... | William P. Jennings, | Scranton, | A. E. Yetter, | Pittston, | Erie |
| Lehigh Valley Coal Co. Mineral Spring, Heddelburg No. 1, | Luzerne,..... | Thomas Thomas, | Wilkes-Barre, | { J. H. Haertter, W. D. Owens, } | Wilkes-Barre, Pittston, | Lehigh Valley |
| Traders Coal Co. Ridgewood, | Luzerne,..... | E. B. Jermyn, | Scranton, | J. P. Corcoran, | Old Forge, | Erie and C. R. R. of N. J. |
| Wilkes-Barre Colliery Co. Madelira, | Luzerne,..... | W. G. Thomas, | Pottsville, | W. Gordon Thomas, ... | Parsons, | Delaware and Hudson |
| Conlon Coal Co. Conlon, | Luzerne,..... | John Conlon, | Hudson, | William Hilbert,..... | Plains, | Delaware and Hudson |
| Central Coal Co. Wyoming, | Luzerne,..... | Joseph G. Saricks, ... | Freeland, | John G. Saricks, ... | Hudson, | Delaware and Hudson |
| McCauley Coal Co. Pickaway, | Luzerne,..... | W. H. McCauley, ... | Pittston, | John Carden, | Pittston, | Lehigh Valley |

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|-----------------------------------|----------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Pennsylvania Coal Co. | | | | | | | | | | | | | |
| Barron, 9, | Luzerne, | 211,217 | 24,205 | 2,674 | 238,254 | 227 | 537 | 4 | 3 | 157,500 | 3,700 | 7,390 | 39 |
| Number 9, | | 718,375 | 74,500 | 6,479 | 797,263 | 370 | 1,484 | 7 | 6 | 67,500 | 24,755 | 19,500 | 135 |
| Number 6, | | 563,435 | 56,933 | 12,399 | 630,817 | 255 | 1,705 | 3 | 7 | 802,500 | 1,150 | 65,000 | 151 |
| Number 14, | | 994,739 | 111,283 | 3,197 | 1,019,221 | 265 | 2,228 | 10 | 87 | 1,221,875 | 20,400 | 27,300 | 297 |
| Even, | | | | | | | 117 | ..... | 63 | | | | 7 |
| Totals, | | 2,593,652 | 297,185 | 24,748 | 2,655,585 | ..... | 6,298 | 24 | 30 | 2,879,475 | 49,825 | 119,100 | 594 |
| Delaware and Hudson Co. | | | | | | | | | | | | | |
| Lafin, | Luzerne, | 168,018 | 21,914 | 898 | 190,809 | 167 | 579 | 1 | 9 | 285,290 | 62,067 | ..... | 80 |
| Delaware, | | 307,250 | 23,715 | 7,093 | 344,078 | 272 | 812 | 2 | 3 | 436,000 | 17,000 | ..... | 67 |
| Pine Ridge, | | 465,852 | 11,169 | 2,210 | 479,661 | 236 | 1,252 | 8 | 11 | 633,100 | 22,005 | 50 | 77 |
| Totals, | | 941,000 | 63,388 | 10,201 | 1,014,589 | ..... | 2,624 | 14 | 28 | 1,371,390 | 101,715 | 59 | 224 |
| Hillside Coal and Iron Co. | | | | | | | | | | | | | |
| Barter, | Luzerne, | 613,310 | 43,876 | 7,338 | 664,524 | 297 | 1,584 | 3 | 8 | 672,500 | 18,850 | 41,700 | 102 |
| Lehigh Valley Coal Co. | | | | | | | | | | | | | |
| Mineral Spring, | Luzerne, | 215,215 | 24,514 | 7,673 | 247,500 | 213 | 445 | 3 | ..... | 112,375 | 89,470 | ..... | 67 |
| Hofenberg No. 1, | | 246,923 | 33,409 | 3,227 | 282,559 | 221 | 549 | 2 | 1 | 254,350 | 26,448 | ..... | 30 |
| Totals, | | 462,236 | 57,923 | 9,909 | 529,059 | ..... | 394 | 5 | 1 | 367,225 | 115,818 | ..... | 163 |

| | | | | | | | | | | | | | | |
|--|----------------|-----------|---------|--------|-----------|-------|--------|-------|-------|-------|-----------|---------|---------|-------|
| Ridgewood, | Luzerne, | 182,222 | 14,600 | 713 | 197,555 | 248 | 491 | 1 | 1 | ..... | 248,575 | 6,200 | ..... | 47 |
| Wilkes-Barre Colliery Co., Madocra, | Luzerne, | 145,028 | 2,855 | 2,303 | 150,196 | 262 | 206 | 1 | 8 | ..... | 176,875 | 2,700 | ..... | 16 |
| Conlon Coal Co., Conlon, | Luzerne, | 47,321 | ..... | 2,250 | 49,581 | 296 | 85 | ..... | 1 | ..... | 17,500 | 400 | ..... | 6 |
| Wyoming, Central Coal Co., | Luzerne, | 26,393 | 3,165 | 954 | 29,812 | 227 | 110 | ..... | ..... | ..... | 31,400 | 8,470 | ..... | 3 |
| Pickaway, McCauley Coal Co., | Luzerne, | 3,366 | 130 | ..... | 3,486 | 65 | 31 | ..... | ..... | ..... | 7,500 | 625 | ..... | 5 |
| Grand totals, ..... | ..... | 4,811,548 | 433,112 | 57,707 | 5,225,367 | ..... | 12,522 | 48 | 76 | ..... | 5,775,350 | 206,760 | 161,450 | 1,169 |

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | | Locomotives | | | | Total horse power | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors |
|-----------------------------------|----------|-------------------|-------------|---------|-------------|-------------------|-------------|-------|-------|----------|-------------------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Air | Electric | | | | | | | | |
| Pennsylvania Coal Co., | Luzerne, | ..... | ..... | ..... | ..... | 15,878 | ..... | 12 | 11 | 47 | 171 | 14,010 | 22 | 32,640 | 16,730 | 6 | 19 | |
| Delaware and Hudson Co., ..... |  | ..... | 15,878 | ..... | ..... | 6,613 | ..... | 2 | ..... | 24 | 168 | 8,365 | 9 | 13,400 | 6,200 | 3 | 7 | |
| Hillside Coal and Iron Co., ..... |  | ..... | 3,460 | ..... | ..... | 3,460 | ..... | 5 | ..... | 26 | 33 | 3,390 | 6 | 4,000 | 1,700 | 5 | 1 | |
| Lehigh Valley Coal Co., ..... |  | ..... | 2,950 | ..... | ..... | 2,950 | ..... | 1 | ..... | 47 | 47 | 4,411 | 8 | 6,197 | 4,977 | ..... | ..... |  |
| Traders Coal Co., ..... |  | ..... | 800 | ..... | ..... | 800 | ..... | ..... | ..... | ..... | 10 | 1,200 | 2 | 500 | 1,000 | ..... | ..... |  |
| Wilkes-Barre Colliery Co., ..... |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | 800 | 300 | 1 | 1 | |
| Conlon Coal Co., ..... |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 90 | 180 | ..... | ..... |  |
| Central Coal Co., ..... |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |
| McCauley Coal Co., ..... |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |
| Totals, | | | 182 | 29,881 | ..... | 29,881 | 29,881 | 23 | 11 | 100 | 430 | 31,361 | 51 | 57,627 | 31,077 | 15 | 28 | |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|------------------------------|--------------------------|-------------------|----------------|--------------|-------------------|------------------|-------------------|-------------------------|--------|--|
| Jan. | 7 Charles Farcini, | Italian, | Miner, | 27 M., | M., | 1 | 4 | Larnum, | Lazear | Killed by fall of roof at face of chamber. |
| 9 Mike Czarowski, | | Austrian, | Miner, | 53 S., | S., | 1 | 2 | Pine Ridge, | | Killed by fall of roof at face of chamber. |
| 11 Walter Paleques, | | Lithuanian, | Miner, | 57 ..... | ..... | ..... | ..... | Number 14, | | Killed by explosion of blast at face of chamber. |
| 13 Charles Prusids, | | Lithuanian, | Miner, | 40 M., | M., | 1 | 4 | Number 6, | | Killed by fall of roof at face of chamber. |
| 15 John Dredger, | | English, ..... | ..... | 52 ..... | ..... | ..... | ..... | Heidelberg No. 1, | Lazear | Killed by fall of coal at face of chamber. |
| 16 John Dredger, | | Russian, | Driver, | 18 S., | S., ..... | ..... | ..... | Lafin, | | Killed by cars on tunnel. |
| 17 Charles Gudziolko, | | Lithuanian, | Miner, | 35 M., | M., | 1 | 1 | Number 8, | | Killed by explosion of powder in chamber. |
| 18 Vincent Marcone, | | Italian, | Driver, | 16 S., | S., ..... | ..... | ..... | Number 14, | | Killed by explosion of cars on slope. |
| 19 Adam Philbeck, | | American, | Runner, | 20 S., | S., ..... | ..... | ..... | Number 14, | Lazear | Killed by fall of roof in chamber. |
| 20 Zuzelchimo Coutre, | | Polish, | Laborer, | 21 M., | M., | 1 | 1 | Number 14, | | Killed by fall of roof in chamber. |
| 21 Frank Zagnon, | | Italian, | Miner, | 55 M., | M., | 1 | 1 | Mineral Spring, | | Killed by fall of roof at face of chamber. |
| 22 Alex. Melosky, | | Lithuanian, | Miner, | 33 M., | M., | 1 | 3 | Madara, | | Killed by fall of roof at face of chamber. |
| 23 Anthony Gironzi, | | Polish, | Laborer, | 43 M., | M., | 1 | 1 | Pine Ridge, | Lazear | Killed by fall of coal on pillar work. |
| 24 Robert Parker, | | Polish, | Laborer, | 22 M., | M., | 1 | 1 | Pine Ridge, | | Killed by fall of roof at face of chamber. |
| 25 Joseph Lavendoskie, | | English, | Miner, | 50 M., | M., | 1 | 1 | Number 6, | | Killed by cars on gangway. |
| 26 John Bogor, | | Polish, | Miner, | 31 M., | M., | 1 | 4 | Pine Ridge, | | Killed by fall of roof in chamber. |
| 27 John Bogor, | | Polish, | Miner, | 33 M., | M., | 1 | 4 | Number 9, | Lazear | Killed by fall of roof at face of chamber. |
| 28 John Zolick, | | Slovak, | Miner, | 43 M., | M., | 1 | 4 | Butler, | | Killed by fall of coal at face of chamber. |
| 29 Edward Davis, | | Polish, | Miner, | 45 M., | M., ..... | ..... | ..... | ..... |  | Killed by explosion of blast at face of chamber. |
| 30 Edward Davis, | | Welsh, | Laborer, | 33 S., | S., | 1 | 4 | Barnum, | | Killed by cars on gangway. |
| 31 Anthony Lottin, | | Lithuanian, | Driver, | 48 M., | M., ..... | ..... | ..... | Number 9, | Lazear | Killed by explosion of blast in cross-cut. |
| 32 Lewis Honoskie, | | Polish, | Miner, | 48 S., | S., | 1 | 4 | Number 14, | | Killed by explosion of blast in cross-cut. |
| 33 Frank Brodzkie, | | Polish, | Miner, | 37 M., | M., | 1 | 2 | Delaware, | | Killed by fall of roof at face of chamber. |
| 34 Joseph Martini, | | Polish, | Miner, | 42 M., | M., | 1 | 2 | Barnum, | | Killed by fall of roof at face of chamber. |
| 35 John Borvay, | | German, | Laborer, | 43 M., | M., | 1 | 4 | Barnum, | Lazear | Killed by fall of roof at face of chamber. |
| 36 John Hammon, | | Polish, | Miner, | 21 M., | M., | 1 | 1 | Pine Ridge, | | Killed by fall of roof at face of chamber. |
| 37 John Hammon, | | Polish, | Miner, | 49 M., | M., | 1 | 4 | Butler, | | Killed by explosion of blast at face of chamber. |
| 38 Vincent Borswick, | | Polish, | Miner, | 36 M., | M., ..... | ..... | ..... | ..... |  | Killed by explosion of blast at face of chamber. |
| 39 Alex. Rafis, | | Austrian, | Miner, | 45 M., | M., | 1 | 2 | Mineral Spring, | Lazear | Killed by fall of roof at face of chamber. |
| 40 John Leckowski, | | Polish, | Miner, | 42 M., | M., | 1 | 1 | Number 14, | | Killed by fall of roof at face of chamber. |
| Aug | Simon Dan, | Polish, | Miner, | 40 M., | M., ..... | ..... | ..... | ..... | Lazear | Killed by fall of roof at face of chamber. |
| | | | | | | | | | | Killed by fall of roof at face of chamber. |

TABLE 4.—Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|------------------------|----------------|----------------|-----|-------------------|------------------|-------------------|-----------------------|----------------|---|
| Aug. 6 | George Zamczek, .. | Polish, | Miner, | 43 | M. | 1 | 3 | Delaware, ..... | ..... | Killed by explosion of blast at face of chamber. |
| 23 | William Glokias, | Polish, | Miner, | 39 | M. | 1 | 5 | Mineral Spring, ..... | ..... | Killed by fall of roof at face of chamber. |
| 28 | Bart Barnowski, | Polish, | Miner, | 51 | M. | 1 | 4 | Lafin, ..... | ..... | Fatally burned by explosion of powder in chamber. |
| Sept. 10 | Nicholas Test, | Italian, | Headman, | 25 | M. | 1 | .... | Number 9, ..... | ..... | Killed by cars near head of shaft, Outside |
| 22 | Edward Kelley, | Irish, | Laborer, | 21 | S. | .... | .... | Number 14, .... | ..... | Smothered in rush of sand and clay, Outside. |
| 28 | Anthony Roman, | Russian, | Laborer, | 45 | M. | 1 | 6 | Number 9, ..... | ..... | Killed by cars on gangway. |
| 2 | David Frattl, | Italian, | Laborer, | 24 | S. | .... | .... | Ridgewood, .... | ..... | Killed by explosion of blast in cross-cut. |
| 6 | John Lameshinski, .. | Polish, | Driver, | 24 | S. | .... | .... | Number 14, .... | ..... | Killed by cars while riding on bumper, Outside. |
| 9 | Stanley Enchieh, | Polish, | Miner, | 28 | S. | .... | .... | Heldberg No. 1, | Luzerne, | Killed by explosion of blast at face of chamber. |
| 15 | Raphael Zeplo, | Italian, | Laborer, | 26 | M. | 1 | .... | Number 9, ..... | ..... | Killed by fall of roof at face of chamber. |
| 16 | Adam Okum, | Polish, | Miner, | 55 | M. | 1 | 4 | Pine Ridge, .... | ..... | Killed by explosion of blast at face of chamber. |
| Nov. 6 | John Reskey, | German, | Miner, | 55 | M. | 1 | 3 | Pine Ridge, .... | ..... | Killed by fall of roof at face of chamber. |
| 22 | John Democolsky, | Polish, | Miner, | 39 | M. | 1 | 2 | Lafin, ..... | ..... | Killed by fall of roof at face of chamber. |
| 8 | Leon Rickel, | Polish, | Miner, | 50 | M. | 1 | 5 | Number 14, .... | ..... | Killed by fall of roof at face of chamber. |
| 18 | Edward Resvokle, | Polish, | Miner, | 27 | S. | .... | .... | Number 9, ..... | ..... | Killed by explosion of blast in cross-cut. |
| 21 | Richard Webb, | English, | Motorman, | 28 | M. | 1 | 2 | Butler, ..... | ..... | Killed by cars in chamber. |
| 21 | Charles Merchak, | Polish, | Miner, | 38 | M. | 1 | .... | Number 14, .... | ..... | Killed by fall of coal at face of chamber. |
| 29 | Samuel Bozolino, | Italian, | Laborer, | 24 | S. | .... | .... | Number 6, ..... | ..... | Killed by cars in old chamber. |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|-------------------------|----------------|-----------------------|-----|-------------------|----------------------|----------------|--|
| Jan. 20 | Michael Rehorich, | Slavonian, .. | Miner, | 31 | M. | Heidelberg No. 1, .. | Luzerne, | Fingers cut off by cars at face of chamber. |
| 23 | Frank Resnor, | American, .. | Laborer, .. | 63 | M. | Butler, | | Leg fractured by cars in ash pit. Outside. |
| 26 | William Thomas, | American, .. | Assistant foreman, .. | 37 | M. | Ewen, | | Face and hands burned by explosion of gas on gangway. |
| | George Steel, | American, .. | Assistant foreman, .. | 44 | M. | Ewen, | | Face and hands burned by explosion of gas on gangway. |
| Feb. 3 | George Abouts, | Lithuanian, .. | Laborer, | 25 | S. | Number 9, | | Face and hands burned by explosion of powder in chamber. |
| 4 | Peter Tomshock, | American, .. | Motorman, .. | 21 | S. | Madeira, | | Arm dislocated by explosion of gas in chamber. |
| 8 | Mathew Brady, | American, .. | Miner, | 45 | M. | Ewen, | | Chest burned by explosion of gas in chamber. |
| | Joseph Thirl, | Polish, | Laborer, | 35 | S. | Ewen, | | Body burned by explosion of gas in chamber. |
| | John Flynn, | American, .. | Headman, .. | 42 | M. | Butler, | | Pelvis fractured by cars near shaft. Outside. |
| 11 | Joseph Bartish, | Lithuanian, .. | Miner, | 37 | M. | Pine Ridge, | | Leg fractured by explosion of blast at face of chamber. |
| 12 | Frank Valeshie, | Polish, | Laborer, | 26 | M. | Conlon, | | Head fractured by explosion of blast at face of chamber. |
| 18 | George Petrecanis, .. | Lithuanian, .. | Laborer, .. | 25 | S. | Ladlin, | | Head fractured by explosion of blast at face of chamber. |
| 26 | Dominick Dolsander, .. | Italian, | Engineer, .. | 19 | S. | Butler, | | Arm fractured by rope in engine house. Outside. |
| March 1 | Edward Skidlowski, .. | Polish, | Miner, | 25 | S. | Delaware, | | Head bruised by explosion of blast at face of chamber. |
| | Charles Odinger, | American, .. | Laborer, .. | 42 | S. | Madeira, | | Leg bruised by cars on gangway. |
| 23 | Frank Sadowskie, | Polish, | Miner, | 28 | M. | Pine Ridge, | | Leg fractured by explosion of blast at face of chamber. |
| 24 | Anthony Syrakas, | Polish, | Miner, | 38 | M. | Ladlin, | | Leg fractured by rock sliding from gob in chamber. |
| 30 | Joseph McFale, | Irish, | Miner, | 50 | M. | Number 9, | | Head fractured by explosion of blast at face of chamber. |
| | Paul Marcusanis, | Lithuanian, .. | Miner, | 36 | M. | Ladlin, | | Angle dislocated by fall of roof in chamber. |
| April 13 | Roeh Clunone, | Italian, | Footman, .. | 22 | M. | Number 6, | | Jaw fractured by cars on gangway. |
| | Joseph Fissel, | Italian, | Motorman, .. | 52 | M. | Number 6, | | Leg fractured by cars on slope. |
| | George Severnak, | Slavonian, .. | Shatepicker, .. | 15 | S. | Pine Ridge, | | Arm fractured by machinery in breaker. Outside. |

TABLE 5. Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|-------|----------------------------|----------------|---------------|-----|-------------------|-------------------|-----------------|---|
| April | 17 Sabastine Klink, ... | Polish, | Miner, | 38 | M. | Pine Ridge, | | Face and lands burned by explosion of gas in chamber. |
| | Stephen Kunkel, ... | Austrian, .. | Laborer, .. | 44 | M. | Pine Ridge, | | Face and lands, burned by explosion of gas in chamber. |
| | Andrew Vistak, | Austrian, .. | Laborer, .. | 34 | M. | Pine Ridge, | | Leg broken by cars in chamber. |
| May | 18 Jess Tule, | Italian, | Laborer, .. | 26 | S. | Number 6, | | Face and lands burned by explosion of powder in chamber. |
| | 6 Michael Dolsinski, .. | German, | Teamster, .. | 68 | M. | Delaware, | | Leg broken by wheel of wagon, Outside. |
| | 11 Frank Heffron, | American, .. | Laborer, .. | 29 | S. | Pine Ridge, | | Arm fractured by falling from boiler house roof, Outside. |
| | John Salus, | Slavonian, .. | Laborer, .. | 48 | M. | Number 14, | | Face lacerated by explosion of blast at face of chamber. |
| | 12 William Topak, | American, .. | Laborer, .. | 18 | S. | Pine Ridge, | | Fingers crushed by cars, Outside. |
| | 13 William Rhoads, | Polish, | Laborer, .. | 40 | M. | Barnum, | | Foot crushed by fall of roof at face of chamber. |
| | Thomas Regan, | Irish, | Miner, | 42 | M. | Barnum, | Lazearne, | Head lacerated by fall of roof at face of chamber. |
| | 22 Richard McDonald, .. | American, .. | Fire boss, .. | 51 | M. | Pine Ridge, | | Face and lands burned by explosion of gas in chamber. |
| | 29 George Simpson, | Slavonian, .. | Laborer, .. | 53 | M. | Number 14, | | Nose bruised by cars on gangway. |
| June | 1 John Lepko, | Russian, | Miner, | 42 | M. | Delaware, | | Face and lands burned by explosion of powder in chamber. |
| | 9 Mazearne Proctor, | Italian, | Miner, | 42 | M. | Number 14, | | Arm fractured by explosion of blast at face of chamber. |
| | 16 Theodore Charlton, .. | American, .. | Rockman, .. | 34 | M. | Number 6, | | Body injured by being struck by rope on gangway. |
| | 23 Martin Komey, | American, .. | Laborer, .. | 44 | M. | Number 9, | | Leg fractured by cars on gangway. |
| | 26 Frank Ceganshanski, .. | Polish, | Miner, | 31 | M. | Number 6, | | Hands bruised by fall of rock at face of chamber. |
| | 8 Joseph Kozarek, | Polish, | Miner, | 27 | M. | Ladlin, | | Fingers crushed by cars in chamber. |
| July | 14 Paul Kuraskie, | Russian, | Laborer, .. | 35 | M. | Delaware, | | Leg fractured by fall of roof at face of chamber. |
| | 21 John Vistekopski, | Lithuanian, .. | Miner, | 35 | M. | Ladlin, | | Back bruised by fall of roof at face of chamber. |
| | Barney Guzowski, | German, | Romer, | 29 | S. | Ladlin, | | Finger cut off by cars on gangway. |
| 23 | Felix Biscontine, | Italian, | Miner, | 32 | M. | Burter, | | Leg fractured by fall of roof at face of chamber. |

| | | | | | | | |
|--------------|----|----------------------------|-------------------|-------------------|----|----------------------|---|
| July Aug. | 30 | Frank Laczynski, | Italian, | Driver, | 19 | N. Number 6, | Leg fractured by cars on gangway. |
| | 6 | Dominick Gutik, | Polish, | Laborer, | 36 | N. Number 14, | Shall fractured by fall of roof at face of chamber. |
| | 12 | Stanley Wellaski, | Lithuanian, | Laborer, | 22 | S. Madara, | Leg fractured by cars on gangway. |
| | 28 | Samuel Wasloski, | American, | Motorman, | 38 | S. Madara, | Leg fractured by cars on gangway. |
| | | Walter Lufanski, | Polish, | Miner, | 40 | M. Delaware, | Face and hands burned by explosion of gas powder in chamber. |
| Sept. | | Joseph Sletske, | Polish, | Laborer, | 35 | M. Ladin, | Face and hands burned by explosion of powder in chamber. |
| | 3 | Martin Garvey, | American, | Engineer, | 70 | S. Pine Ridge, | Foot bruised by cars on gangway. |
| | 8 | Andrew Datto, | Lithuanian, | Miner, | 49 | M. Number 9, | Fingers cut off by fall of roof at face of chamber. |
| | 9 | Thomas Rablitt, | Austrian, | Miner, | 30 | M. Pine Ridge, | Leg fractured by explosion of blast at face of chamber. |
| | 11 | Michael Basta, | Italian, | Miner, | 29 | M. Pine Ridge, | Back sprained by cars in chamber. |
| | 13 | Andrew Kirelin, | Lithuanian, | Miner, | 41 | M. Pine Ridge, | Arm and ribs fractured by explosion of blast at face of chamber. |
| | 18 | Adam Mizick, | Lithuanian, | Miner, | 21 | S. Butler, | Leg fractured by fall of roof at face of chamber. |
| | 29 | Frank Hale, | American, | Headman, | 33 | M. Ladin, | Arm fractured, Kicked by a mule while putting him on cage. Outside. |
| Oct. | | George Tobbe, | German, | Rimmer, | 24 | N. Number 6, | Leg fractured by fall of roof on gangway. |
| | 3 | Joseph Muskie, | American, | Shot-poker, | 15 | S. Ladin, | Arm fractured by cars. Outside. |
| | 11 | Adam Backelin, | Polish, | Miner, | 40 | M. Baroni, | Ankle fractured by fall of roof at face of chamber. |
| Nov. | | Mathiek Szeches, | Russian, | Laborer, | 26 | N. Number 14, | Knee fractured by cars on gangway. |
| | 11 | Anthony Savitski, | Russian, | Miner, | 39 | M. Madara, | Head lacerated by fall of roof at face of chamber. |
| | | Stanley Gurski, | Polish, | Miner, | 25 | S. Number 14, | Leg fractured by fall of roof at face of chamber. |
| | 24 | Victor Verpolsky, | Polish, | Miner, | 28 | S. Butler, | Hand blown off by explosion of blast in chamber. |
| Dec. | | Samuel Pfafoskie, | Polish, | Motorman, | 22 | S. Madara, | Face lacerated by explosion of gas at face of chamber. |
| | 2 | Anthony Bulzinski, | Polish, | Miner, | 41 | M. Pine Ridge, | Leg fractured by falling in breaker, the side. |
| | 7 | James Sibona, | Polish, | Miner, | 52 | M. Ewen, | Leg fractured by fall of roof at face of chamber. |
| | | John Oline, | Italian, | Laborer, | 36 | S. Ewen, | Chamber fractured by fall of roof at face of chamber. |
| | 19 | Peter Rusevar, | Lithuanian, | Shot-poker, | 15 | S. Number 9, | Leg fractured by explosion of blast at face of chamber. |
| | 18 | Felix Demosky, | Polish, | Miner, | 30 | S. Number 9, | Leg bruised by explosion of blast at face of chamber. |
| | 29 | Frank Bereda, | Italian, | Laborer, | 20 | M. Butler, | Leg bruised by explosion of blast at face of chamber. |
| | | Michael Handel, | Polish, | Miner, | 45 | M. Madara, | Arm bruised by cars at face of chamber. |
| | | Anthony Billis, | Austrian, | Laborer, | 40 | S. Madara, | Chamber fractured by fall of roof in boiler house. |
| | 21 | Joseph Cardela, | Italian, | Laborer, | 28 | M. Butler, | Face of chamber. |
| | | Antonina Piacitelli, | Italian, | Miner, | 41 | M. Number 14, | Chamber fractured by fall of coal at face of chamber. |
| | | Junway Afrini, | Italian, | Laborer, | 25 | S. Number 14, | Chamber fractured by fall of coal at face of chamber. |

Lazorne.

CONDITION OF COLLIERIES

PENNSYLVANIA COAL COMPANY

Barnum, Numbers 9, 6, 14 and Ewen Collieries.—Ventilation drainage and condition as to safety, good.

DELAWARE AND HUDSON COMPANY

Lafin, Delaware and Pine Ridge Collieries.—Ventilation, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Mineral Spring and Heidelberg No. 1 Collieries.—Ventilation, drainage and condition as to safety, good.

TRADERS COAL COMPANY

Ridgewood Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

WILKES-BARRE COLLIERY COMPANY

Madeira Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

CONLON COAL COMPANY

Conlon Colliery.—Ventilation, drainage and condition as to safety, good.

CENTRAL COAL COMPANY

Wyoming Colliery.—Ventilation, drainage and condition as to safety, good.

McCAULEY COAL COMPANY

Pickaway Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

IMPROVEMENTS

PENNSYLVANIA COAL COMPANY

Number 9 Colliery.—Installed air compressor at the shaft, and erected a brick extension to the engine room. Completed a brick building 36 feet by 62 feet with a slag roof, at No. 3 shaft. A concrete partition was put in No. 3 shaft between the upcast and downcast from the Red Ash to the surface.

Number 6 Colliery.—Inside: At No. 6 shaft. Installed 2 electric motors to replace air motors, and a large pair of engines on the Red Ash slope. At No. 5 shaft, installed 3 electric motors to replace air motors.

Outside. Completed a brick, iron and concrete power house 38 by 96 by 16 feet, and installed therein one 330 H. P. McEwen engine driving D. C. generator to furnish electricity to Nos. 5, 6 and 11 shafts. Also completed a concrete, iron and brick building for sand-dryer, cement-house, lime, hay, feed, hospital and storeroom.

Number 14 Colliery.—At the Red Ash shaft installed a hoisting and a fan engine, and built houses for same. Also built an addition to No. 2 tower. At the Hillman slope installed an engine, and built a house for same.

Ewen Colliery.—Inside: Sunk an air shaft, 12 feet by 14 feet, from surface to the Marcy vein at Hoyt shaft. A new concrete pump-room was built in the Schooley shaft, Pittston vein, and a Jeanesville pump, 24 by 48 by 12 by 36 inches was installed therein.

Outside:—Erected a new concrete and steel breaker and washery to replace the breaker destroyed by fire on December 11, 1914. Installed a 14-foot fan, enclosed in a brick building, to ventilate workings in the Hoyt shaft. At the Schooley shaft, a new washery was erected to prepare coal taken from the culm bank for steam purposes.

DELAWARE AND HUDSON COMPANY

Laffin Colliery.—Extended No. 4 plane, Red Ash vein, a distance of 250 feet.

Delaware Colliery.—Extended No. 14 plane in the Red Ash vein, 350 feet through fault to the workable coal beyond. Completed a tunnel, from No. 7 plane Ross vein, a distance of 500 feet, to cut veins in back basin.

Pine Ridge Colliery.—Completed No. 26 slope, Checker to Bennett vein, and No. 30 slope in Red Ash vein was extended a distance of 250 feet toward the basin.

HILLSIDE COAL AND IRON COMPANY

Butler Colliery.—Completed the water tunnel to Fernwood to take the water to the Pittston water tunnel.

LEHIGH VALLEY COAL COMPANY

Mineral Spring Colliery.—Inside: A fire line was installed in the Red Ash vein.

Outside:—A concrete dam was constructed at the reservoir to increase capacity of same. Completed structural steel work under an empty car trestle. Drilled a bore hole from the surface to the Red Ash vein, a depth of 265 feet, to conduct signal wires from outside engine house to No. 5 plane.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in the Y. M. C. A. Hall, Pittston, May 18 and 19. The Board of Examiners was composed of Hugh McDonald, Inspector; H. T. McMillan, Superintendent, West Pittston; Frank J. Parks, Miner, Pittston; and Michael J. Ford, Miner, Pittston.

The following persons passed a satisfactory examination and were granted certificates:

MINE FOREMEN

Michael J. Reap, David Anderson, Pittston; James Flynn, Parsons; John Girvan, Plainsville.

ASSISTANT MINE FOREMEN

Dugald MacLellan, John W. Owens, John Regan, Norman Smiles, Ambrose Martin, Thomas Gibbons, James McGlynn, Pittston; Charles S. Watkins, Raymond Mugford, Parsons; Martin A. Duddy, John W. Davies, Plains; Vania Price, Avoca; Charles Dobbie, Duryea; John J. Brennan, Miners Mills; and John A. Evers, Luzerne.

SEVENTH DISTRICT

LUZERNE COUNTY

Wilkes-Barre, Pa., February 24, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir:—I have the honor to transmit herewith my annual report of the Seventh Anthracite District for the year ending December 31, 1915.

Respectfully submitted,

THOMAS J. WILLIAMS,

Inspector

SUMMARY OF STATISTICS

| | |
|--|-----------|
| Number of collieries, | 19 |
| Number of mines, | 44 |
| Number of mines in operation, | 44 |
| Number of tons of coal shipped to market, | 4,667,206 |
| Number of tons used at mines for steam and heat, | 563,902 |
| Number of tons sold to local trade and used by employes, | 302,859 |
| Number of tons produced, | 5,533,967 |
| Number of tons produced by compressed air machines, .. | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 9,092 |
| Number of persons employed outside, | 2,371 |
| Number of fatal accidents inside of mines, | 60 |
| Number of fatal accidents outside, | 5 |
| Number of non-fatal accidents inside of mines, | 91 |
| Number of non-fatal accidents outside, | 13 |
| Number of tons of coal produced per fatal accident in- side, | 92,232 |
| Number of tons produced per fatal accident outside, ... | 1,106,793 |
| Number of tons produced per fatal accident inside and outside, | 85,138 |
| Number of persons employed per fatal accident inside, .. | 152 |
| Number of persons employed per fatal accident outside, | 474 |
| Number of persons employed per fatal accident inside and outside, | 176 |
| Number of persons employed per non-fatal accident in- side, | 100 |
| Number of persons employed per non-fatal accident out- side, | 182 |
| Number of persons employed per non-fatal accident in- side and outside, | 110 |
| Number of wives made widows, | 35 |
| Number of children made orphans, | 70 |
| Number of steam locomotives used inside of mines, .... | ..... |
| Number of steam locomotives used outside, | 37 |
| Number of compressed air locomotives used inside, .. | 14 |
| Number of compressed air locomotives used outside, .. | ..... |
| Number of electric motors used inside, | 28 |
| Number of electric motors used outside, ..... | ..... |
| Number of gasoline locomotives used inside, ..... | ..... |
| Number of fans in use, | 48 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 41 |
| Number of non-gaseous mines in operation, | 3 |
| Number of new mines opened, ..... | ..... |
| Number of old mines abandoned, ..... | ..... |

TABLE A
PRODUCTION OF COAL

| Names of Operators | Tons |
|---|------------------|
| Lehigh and Wilkes-Barre Coal Company, | 2,521,422 |
| Lehigh Valley Coal Company, | 1,890,283 |
| Delaware and Hudson Company, | 561,066 |
| Wilkes-Barre Anthracite Coal Company, | 191,436 |
| Red Ash Coal Company, | 180,989 |
| Pittston Coal Mining Company, | 129,918 |
| Campbell and Johns, | 38,223 |
| Delaware, Lackawanna and Western Railroad Com- pany, | 20,690 |
| Total, | <u>5,533,967</u> |
| Production by Counties | |
| Luzerne, | <u>5,533,967</u> |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|---|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | 1 | .... | 1 | .... | 2 | .... | 1 | .... | 1 | .... | .... | .... | 6 | 10.00 |
| Falls of slate, | 1 | 1 | 2 | .... | .... | .... | .... | .... | .... | .... | .... | .... | 6 | 10.00 |
| Falls of roof, | 1 | .... | .... | .... | 1 | .... | 1 | 1 | 1 | .... | 1 | .... | 6 | 10.06 |
| Mine cars, | 1 | .... | .... | .... | .... | 1 | 1 | 1 | .... | .... | .... | .... | 5 | 13.33 |
| Explosions of gas, .... | .... | 14 | .... | 1 | .... | .... | .... | .... | .... | .... | .... | .... | 15 | 25.00 |
| Explosions of powder and dynamite, | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 1.67 |
| Blasts, premature and otherwise, ..... | .... | .... | 1 | 2 | .... | 1 | 1 | .... | 1 | 1 | 1 | 2 | 13 | 21.66 |
| Falling into shafts, ... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 1.67 |
| Struck by piece of coal, ..... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | 1 | 1.67 |
| Struck by windlass, .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 1.67 |
| Struck by timber, | 1 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 1.67 |
| Totals, | 6 | 15 | 4 | 5 | 7 | 2 | 3 | 4 | 5 | 4 | 5 | 3 | 61 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, ..... | .... | .... | .... | 1 | .... | 1 | .... | .... | 1 | 1 | 1 | .... | 5 | 100.00 |
| Totals, ..... | .... | .... | .... | 1 | .... | 1 | .... | .... | 1 | 1 | 1 | .... | 5 | 100.00 |
| Grand totals inside and outside, | 6 | 15 | 4 | 6 | 7 | 2 | 3 | 4 | 6 | 5 | 6 | 3 | 65 | ... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | 1 | 1 | ... | 1 | ... | 1 | 1 | ... | 3 | 1 | 2 | 1 | 12 | 13.38 |
| Falls of slate, | 1 | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | 4 | 4.46 |
| Falls of roof, | 1 | 1 | ... | 1 | ... | 1 | ... | ... | ... | 1 | ... | ... | 9 | 9.89 |
| Mine cars, | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | 14 | 15.28 |
| Explosions of gas, | 4 | 1 | 2 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 19 | 20.88 |
| Blasts, premature and otherwise, | ... | 1 | 2 | 4 | ... | 4 | 2 | 1 | 1 | 3 | ... | ... | 18 | 19.78 |
| Mules, | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 2 | 2.20 |
| Struck by axe, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1.10 |
| Struck by rope, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 1.10 |
| Struck by lever, | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | 1.10 |
| Struck by timber, | ... | ... | ... | 1 | ... | 1 | ... | 1 | ... | ... | ... | ... | 4 | 4.29 |
| Struck by piece of coal, | ... | ... | ... | 1 | ... | 1 | ... | 1 | 1 | ... | ... | ... | 5 | 5.50 |
| Struck by debris, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1.10 |
| Totals, | 9 | 4 | 6 | 14 | 5 | 8 | 6 | 6 | 13 | 10 | 6 | 4 | 91 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | ... | 1 | 1 | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | 4 | 20.77 |
| Machinery, | 1 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | 15.78 |
| Struck by piece of coal, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 | 10.52 |
| Electricity, | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 5.26 |
| Falling, | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 1 | 3 | 15.78 |
| Totals, | 1 | 2 | 2 | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 3 | 13 | 100.00 |
| Grand totals inside and outside, | 10 | 6 | 8 | 14 | 5 | 8 | 6 | 7 | 14 | 11 | 7 | 7 | 104 | ... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|---|----------|-----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| Inside | | | | | | | | | | | | |
| Assistant mine foremen, | | | | | 1 | | | | | | | 1 |
| Miners, | 1 | 4 | | 3 | 1 | 1 | 1 | 3 | | | 1 | 1 |
| Miners' laborers, | | | | | | | | | | | | 10 |
| Drivers and runners, | 1 | | | | | | 1 | | | 1 | 1 | |
| Doorboys and helpers, | | | | | | | | | | | | 1 |
| Engineers, | | | | 1 | | | | | | | | 1 |
| Headmen, | | | | | | | | | | | | 1 |
| Timbermen, | 1 | | | | | | | | | | 1 | |
| Rockmen, | 1 | | | | 2 | | | | | | 1 | |
| Totals, | 6 | 15 | 4 | 5 | 5 | 2 | 3 | 4 | 5 | 1 | 5 | 3 |
| Outside | | | | | | | | | | | | |
| Foremen, | | | | | | 1 | | | | | | 1 |
| Engineers and firemen, | | | | 1 | | | | | 1 | | 1 | |
| Loaders, | | | | | | | | | | 1 | | 1 |
| Totals, | | | | 1 | | 1 | | | 1 | 1 | | 5 |
| Grand totals inside and outside, | 6 | 15 | 4 | 6 | 7 | 3 | 3 | 4 | 6 | 2 | 6 | 3 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|---|-----------|----------|----------|-----------|----------|----------|----------|----------|-----------|-----------|----------|------------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| Inside | | | | | | | | | | | | |
| Miners, | 6 | 12 | 4 | 8 | 1 | 6 | 4 | 3 | 6 | | 3 | 3 |
| Miners' laborers, | 1 | 1 | | 3 | 1 | 1 | | 3 | 3 | 6 | | 1 |
| Drivers and runners, | 1 | 1 | | 3 | 1 | | | | 1 | | 1 | 9 |
| Pumpmen, | | | | | | | | | 1 | | | 1 |
| Engineers, | | | | | | | | | 1 | | 1 | 1 |
| Rope splicers, | | | | | | | | | | 1 | | 1 |
| Masons, | | | | | | | | | 1 | | | 1 |
| Timbermen, | | | | 1 | | 1 | | | 1 | | | 1 |
| Footmen, | | | | | | | | | | | | 3 |
| Totals, | 9 | 4 | 6 | 14 | 5 | 8 | 6 | 6 | 13 | 10 | 6 | 4 |
| Outside | | | | | | | | | | | | |
| Headmen, | | | | | | | | | | | | 1 |
| Machinists, | | | | | | | | | | | | 1 |
| Engineers and firemen, | | | 1 | | | | | | | | | 1 |
| Statepickers, | 1 | | | | | | | | | | | 1 |
| Laborers, | | | | | | | | 1 | 1 | 1 | | 2 |
| Cranemen, | | | | | | 1 | | | | | | 1 |
| Table cleaners, | | | 1 | | | | | | | | | 1 |
| Dumpers, | | | 1 | | | | | | | | | 1 |
| Loaders, | | 1 | | | | | | | | | 1 | |
| Jig runners, | | 1 | | | | | | | | | | 1 |
| Totals, | 1 | 2 | 3 | | | | | 1 | 1 | 1 | 1 | 3 |
| Grand totals inside and outside, | 10 | 6 | 9 | 14 | 5 | 8 | 6 | 7 | 14 | 11 | 7 | 104 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| Totals | | | | | | | | | | | | |
| American, | 5 | | 1 | | 1 | | 1 | | | 1 | 1 | 11 |
| English, | | | | | 1 | | | | | | | 3 |
| Welsh, | 1 | | | | | 1 | | | | | 1 | 3 |
| Irish, | | | | | | | | 1 | | | | 1 |
| German, | | | | 1 | | 1 | 1 | | | | | 4 |
| Polish, | 1 | 1 | 1 | 3 | 1 | 1 | | 1 | | | | 13 |
| Slavonian, | 1 | 1 | 1 | | | | | | | | | 3 |
| Lithuanian, | | 1 | | | 1 | | | | | | 3 | 8 |
| Anstrian, | 1 | | | | | | | 1 | 3 | | | 11 |
| Russian, | | 1 | | 1 | 1 | | 1 | | 1 | | | 8 |
| Totals, | 6 | 15 | 4 | 6 | 4 | 3 | 3 | 4 | 6 | 2 | 6 | 67 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| Totals | | | | | | | | | | | | |
| Inside | | | | | | | | | | | | |
| American, | 3 | 3 | 3 | 1 | 1 | | | 1 | 1 | | 2 | 14 |
| English, | | | | 1 | 1 | | | | | 1 | | 3 |
| Welsh, | | | 1 | 1 | | | | | | | | 1 |
| Irish, | | | | | 1 | | | | 1 | | | 2 |
| German, | 1 | 1 | | | | | | | | | | 2 |
| Polish, | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 1 | 3 | 25 |
| Italian, | | | | | | | | | | 1 | | 1 |
| Slavonian, | | | 1 | 1 | | | 1 | | | | | 3 |
| Lithuanian, | | | | 1 | | | | | 3 | | 1 | 5 |
| Anstrian, | | 1 | | | | 1 | | | | | | 4 |
| Russian, | | | 1 | | | | 1 | | | 3 | 1 | 10 |
| Greek, | | | | | | | | | 1 | | | 1 |
| Totals, | 10 | 6 | 9 | 14 | 5 | 8 | 6 | 7 | 11 | 11 | 7 | 104 |

| | | | | | | | | | | | | | | | |
|--|-------------------------|----------------------------|------------------------|------|-----|------|----|-----|----------------|--------------|----|---------|---------|---------|-----|
| Lehigh Valley Coal Co. Franklin Colliery: Franklin, | Slope, Tunnel, | Gascons, Non-gas, | Fan, Natural, | 16. | 7. | 2.2 | 90 | 1.6 | Volume, | Steam, | 8 | 189,700 | 290,000 | 238,000 | 371 |
| | | | | | | | | | | | | | | | |
| Dorance Colliery: Baltimore, | Shaft, | Gascons, | Fan, Fan, | 28. | 8. | 8.5 | 69 | 1.7 | Gulbal, | Steam, | 15 | 228,570 | 188,700 | 250,200 | 466 |
| | | | | | | | | | | | | | | | |
| Hillman, | Shaft, | Gascons, | Fan, Fan, | 35. | 12. | 10.5 | 47 | 1.9 | Gulbal, | Steam, | 10 | 176,500 | 144,900 | 185,000 | 270 |
| | | | | | | | | | | | | | | | |
| Prospect Colliery: Prospect, | Shaft, | Gascons, | Fan, Fan, | 30. | 9. | 8. | 55 | 2.0 | Gulbal, | Steam, | 9 | 119,610 | 86,771 | 119,610 | 220 |
| | | | | | | | | | | | | | | | |
| Mikwood, | Shaft, | Gascons, | Fan, Fan, | 36. | 10. | 8.3 | 54 | 1.6 | Gulbal, | Steam, | 7 | 125,615 | 106,017 | 155,807 | 245 |
| | | | | | | | | | | | | | | | |
| Mikvate, | Slope, | Gascons, | Fan, Fan, | 37. | 6. | 6. | 66 | 1.5 | Gulbal, | Steam, | 7 | 98,740 | 87,700 | 104,300 | 168 |
| | | | | | | | | | | | | | | | |
| Henry Colliery: Baltimore, | Shaft, | Gascons, | Fan, Fan, | 29. | 10. | 8. | 54 | 2.7 | Gulbal, | Steam, | 6 | 113,882 | 68,518 | 129,120 | 167 |
| | | | | | | | | | | | | | | | |
| Five-Point, | Shaft, | Gascons, | Fan, Fan, | 28. | 7.5 | 7.5 | 46 | 1.6 | Gulbal, | Steam, | 4 | 82,308 | 78,700 | 97,340 | 98 |
| | | | | | | | | | | | | | | | |
| Wyoming, | Shaft, | Gascons, | Fan, Fan, | 25. | 7. | 6. | 50 | 1.1 | Gulbal, | Steam, | 9 | 101,200 | 93,160 | 116,500 | 96 |
| | | | | | | | | | | | | | | | |
| Red Ash, | Shaft, | Gascons, | Fan, Fan, | 28. | 6.5 | 7.5 | 52 | 1.3 | Gulbal, | Steam, | 7 | 157,130 | 125,120 | 172,326 | 230 |
| | | | | | | | | | | | | | | | |
| Five-Point and Hillman, | Slope, | Gascons, | Fan, Fan, | 20. | 6. | 5.6 | 69 | 1.1 | Gulbal, | Steam, | 7 | 97,700 | 88,600 | 160,700 | 195 |
| | | | | | | | | | | | | | | | |
| Warrior Run Colliery: Warrior Run No. 1, | Slope, | Gascons, | Fan, Fan, | 20. | 6. | 5. | 69 | 1.2 | Gulbal, | Steam, | 6 | 99,860 | 125,580 | 107,800 | 87 |
| | | | | | | | | | | | | | | | |
| Warrior Run No. 4, | Slope, | Gascons, | Fan, Fan, | 11. | 4. | 4. | 75 | 1.1 | Gulbal, | Steam, | 8 | 47,600 | 40,650 | 51,670 | 61 |
| | | | | | | | | | | | | | | | |
| Delaware and Hudson Co. Baltimore No. 5 Colliery: Baltimore No. 5, | Shaft, | Gascons, | Fan, Fan, | 17.5 | 7.5 | 7.5 | 61 | 2.1 | Gulbal, | Steam, | 4 | 125,585 | 109,805 | 141,975 | 169 |
| | | | | | | | | | | | | | | | |
| Baltimore No. 5, | Shaft, | Gascons, | Fan, Fan, | 28. | 7. | 7.5 | 65 | 2.8 | Gulbal, | Steam, | 5 | 192,605 | 178,050 | 207,130 | 213 |
| | | | | | | | | | | | | | | | |
| Baltimore No. 5, | Shaft, | Gascons, | Fan, Fan, | 28. | 7. | 7.5 | 65 | 2.8 | Gulbal, | Steam, | 5 | 192,605 | 178,050 | 207,130 | 213 |
| | | | | | | | | | | | | | | | |
| Conyngham-Hillman, | Shaft, | Gascons, | Fan, Fan, | 20. | 5.8 | 5.8 | 78 | 1.8 | Gulbal, | Steam, | 4 | 87,770 | 80,640 | 101,920 | 88 |
| | | | | | | | | | | | | | | | |
| Conyngham-Hillman, | Shaft, | Gascons, | Fan, Fan, | 17. | 5.4 | 4. | 90 | 1.7 | Gulbal, | Steam, | 4 | 102,920 | 91,370 | 125,960 | 73 |
| | | | | | | | | | | | | | | | |
| Baltimore Tunnel Colliery: Baltimore No. 4, | Tunnel, | Gascons, | Fan, Fan, | 18. | 6. | 5. | 72 | 1. | Gulbal, | Steam, | 4 | 97,310 | 78,280 | 117,750 | 128 |
| | | | | | | | | | | | | | | | |
| Baltimore, | Tunnel, | Gascons, | Fan, Fan, | 8. | 4. | 2.2 | 75 | .8 | Gulbal, | Steam, | 5 | 21,200 | 18,150 | 21,120 | 81 |
| | | | | | | | | | | | | | | | |
| Wilkes-Barre Anthracite Coal Co. Hillman Vein Colliery: Hillman Vein, | Shaft, | Gascons, | Fan, Fan, | 18. | 7. | 8.8 | 96 | 3.7 | Jeffrey, | Steam, | 3 | 159,000 | 151,000 | 165,900 | 274 |
| | | | | | | | | | | | | | | | |
| Red Ash Coal Co. Red Ash No. 1 Colliery: Red Ash, | Slope, | Non-gas, | Fan, Fan, | 15. | 1.9 | 3.9 | 76 | 1.5 | Volume, | Steam, | 7 | 14,000 | 9,000 | 17,400 | 27 |
| | | | | | | | | | | | | | | | |
| Red Ash No. 2 Colliery: Red Ash, | Slope, | Non-gas, | Fan, Fan, | 15. | 7. | 3.9 | 45 | 1.5 | Volume, | Steam, | 7 | 14,000 | 9,000 | 17,400 | 30 |
| | | | | | | | | | | | | | | | |

*Emergency fan.

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|---|---------|--------------------------------|--------------|------------------------|--------------|-------------------|
| Lehigh and Wilkes-Barre Coal Co. Hollenback No. 2 South Wilkes-Barre No. 5 Scranton No. 7 Sugar Notch No. 9 Maxwell No. 20 Empire Washery | Luzerne | Charles F. Huber | Wilkes-Barre | E. J. Newbaker | Wilkes-Barre | C. R. R. of N. J. |
| Lehigh Valley Coal Co. Franklin Dorrance Prospect Henry Warrior Run | Luzerne | Thomas Thomas | Wilkes-Barre | J. H. Haertter | Wilkes-Barre | Lehigh Valley |
| Delaware and Hudson Co. Baltimore No. 5 Baltimore Tunnel Baltimore Tunnel Washery | Luzerne | Charles Dorrance, Jr. | Scranton | S. V. Tench | Scranton | D. and H. |
| Wilkes-Barre Anthracite Coal Co. Hillman Veln | Luzerne | Thomas H. Price | Wilkes-Barre | | | Lehigh Valley |
| Red Ash Coal Co. Red Ash Nos. 1 and 2 Red Ash Washery | Luzerne | William D. Jones | Wilkes-Barre | | | C. R. R. of N. J. |
| Pittston Coal Mining Co. Hadleigh | Luzerne | Charles M. O'Boyle | Sugar Notch | | | C. R. R. of N. J. |
| Campbell and Johns Miners Mills | Luzerne | Lewis Johns | Plains | | | Lehigh Valley |
| Delaware, Lackawanna and Western Railroad Co. Pottsville Nos. 3 and 4 | Luzerne | C. E. Tobey | Scranton | H. G. Davis | Kingston | D. L. and W. |

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | |
|-----------------------------------|---------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used |
| Leligh and Wilkes-Barre Coal Co. | | | | | | | | | | | | |
| Hathaway No. 1 | | 201,818 | 24,298 | 58,824 | 392,940 | 217 | 902 | 5 | 8 | 207,625 | 16,998 | 46,792 |
| South Wilkes-Barre No. 5 | | 447,192 | 42,068 | 90,994 | 589,254 | 209 | 1,297 | 3 | 14 | 350,900 | 19,430 | 101,258 |
| Stanton No. 7 | Luzerne | 551,291 | 57,249 | 24,194 | 632,734 | 207 | 1,437 | 1 | 15 | 528,600 | 29,739 | 39,750 |
| Sugar Notch No. 9 | | 284,392 | 31,614 | 3,124 | 319,130 | 262 | 700 | ..... | 9 | 193,150 | 10,516 | 64,758 |
| Maxwell No. 20 | | 416,687 | 44,558 | 12,600 | 473,241 | 291 | 968 | ..... | 14 | 256,360 | 10,319 | 71,155 |
| Totals | | 2,000,779 | 209,787 | 196,736 | 2,407,302 | ..... | 5,324 | 20 | 69 | 1,646,175 | 93,292 | 321,293 |
| Empire Washery | Luzerne | 111,465 | 2,675 | ..... | 114,120 | 259 | 40 | ..... | 3 | ..... | ..... | ..... |
| Totals | | 2,112,244 | 212,462 | 199,736 | 2,521,422 | ..... | 5,364 | 20 | 63 | 1,646,175 | 93,292 | 321,293 |
| Leligh Valley Coal Co. | | | | | | | | | | | | |
| Franklin | | 296,882 | 40,955 | 5,337 | 343,175 | 219 | 615 | 8 | 6 | 247,525 | 29,298 | ..... |
| Dorrence | | 477,298 | 60,551 | 46,629 | 584,469 | 225 | 871 | 3 | 8 | 445,450 | 24,794 | ..... |
| Prospect | | 244,138 | 50,850 | 7,555 | 402,543 | 207 | 866 | 19 | 8 | 283,650 | 8,575 | ..... |
| Henry | Luzerne | 296,217 | 47,378 | 8,000 | 44,595 | ..... | 859 | 3 | 5 | 207,000 | 187,895 | ..... |
| Warrior Run | | 91,672 | 21,119 | 1,739 | 114,331 | † | 197 | ..... | 2 | 52,925 | 8,813 | ..... |
| Totals | | 1,000,209 | 220,833 | 69,251 | 1,890,283 | ..... | 3,478 | 33 | 29 | 1,306,550 | 289,455 | ..... |
| Totals | | 3,112,453 | 433,295 | 268,987 | 4,353,665 | ..... | 8,842 | 53 | 92 | 3,952,725 | 422,747 | 622 |
| Totals | | 3,112,453 | 433,295 | 268,987 | 4,353,665 | ..... | 8,842 | 53 | 92 | 3,952,725 | 422,747 | 622 |

*Coal prepared at Prospect breaker.

†Coal prepared at Franklin breaker.

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | Locomotives | | | | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors | |
|---|----------|-------------------|-------------|---------|-------------|-------------------|----------|-------|-------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|-------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Air | Electric | | | | | | | |
| Leligh and Wilkes-Barre Coal Co. | Luzerne, | ..... | ..... | 59 | 12,065 | 12,065 | ... | 10 | 14 | .... | 220 | 24,747 | 14 | 15,670 | 5,160 | 1 | 11 |
| Leligh Valley Coal Co. |  | ..... | ..... | 45 | 9,704 | 9,704 | .... | 13 | .... | 21 | 115 | 16,970 | 11 | 16,495 | 14,100 | 5 | 9 |
| Delaware and Hudson Co. |  | ..... | ..... | 29 | 6,835 | 6,835 | .... | 4 | .... | 5 | 105 | 9,103 | 8 | 8,960 | 4,000 | 5 | 2 |
| Wilkes-Barre Anthracite Coal Co. |  | ..... | ..... | 4 | 2,600 | 2,600 | .... | ..... | ..... | ..... | 13 | 2,270 | 2 | 1,900 | 1,000 | 2 | ..... |
| Red Ash Coal Co. |  | ..... | ..... | 3 | 900 | 900 | .... | 6 | ..... | ..... | 28 | 1,508 | 4 | 1,400 | 1,155 | ..... | ..... |
| Pittston Coal Mining Co. |  | ..... | ..... | 2 | 650 | 650 | .... | 1 | ..... | 2 | 9 | 894 | 1 | 700 | 500 | 1 | ..... |
| Campbell and Johns |  | ..... | ..... | 1 | 100 | 225 | .... | 1 | ..... | ..... | 3 | 160 | 1 | 150 | 50 | ..... | ..... |
| Delaware, Lackawanna and Western Railroad Co. |  | ..... | ..... | 5 | 725 | 725 | .... | 1 | ..... | ..... | 4 | 3,467 | 1 | 70 | 70 | 1 | ..... |
| Totals, | | | 1 | 135 | 148 | 32,999 | 33,124 | ... | 37 | 14 | 28 | 498 | 58,719 | 42 | 44,785 | 26,090 | 15 | 24 |

TABLE 3.—Number of each class of employees inside and outside of mines

| TABLE 3.—Number of each class of employed mine and mill workers, by county, 1912 | | | | | | | | | | | | | | | | | | | | | | | | |
|--|----------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|---------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|---------------------|---------------|--------|-------|-------------|
| Names of Operators | County | Inside | | | | | | | | | | | | Outside | | | | | | | | | | Grand total |
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employees | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Statepickers (boys) | Statepickers (men) | Bookkeepers and clerks | All other employees | Total outside | | | |
| Leligh and Wilkes-Barre Coal Co. | Luzerne | 6 | 8 | 91 | 1,634 | 1,058 | 402 | 253 | 20 | 82 | ..... | 4,364 | ..... | 6 | 32 | 102 | 431 | 33 | 21 | ..... | 515 | 1,060 | 5,424 | |
| Leligh Valley Coal Co. | Delaware | 13 | ..... | 71 | 1,016 | 620 | 351 | 97 | 38 | ..... | 694 | 2,800 | ..... | 5 | 43 | 108 | 43 | 12 | 14 | ..... | 383 | 605 | 2,408 | |
| Delaware and Hudson Co. | Delaware | 3 | 3 | 10 | 215 | 315 | 92 | 5 | 13 | 119 | 19 | 819 | ..... | ..... | ..... | 63 | 32 | 40 | 4 | ..... | 209 | 374 | 1,190 | |
| Wilkes-Barre Anthracite Coal Co. | Luzerne | 1 | 1 | 3 | 109 | 112 | 58 | 17 | 8 | 44 | 18 | 264 | 1 | ..... | 4 | 10 | 2 | 18 | 4 | ..... | 33 | 31 | 47 | |
| Red Ash Coal Co. | Pittston | 1 | ..... | ..... | 125 | 115 | 34 | 8 | 3 | 25 | ..... | 311 | ..... | ..... | 11 | 25 | 1 | 1 | ..... | 167 | 253 | 366 | | |
| Pittston Coal Mining Co. | Delaware | 1 | 1 | ..... | 102 | 100 | 20 | 3 | ..... | 4 | 6 | 290 | 1 | ..... | ..... | 9 | 16 | 4 | 1 | ..... | 1 | 29 | 115 | |
| Campbell and Johns | Delaware | 1 | ..... | 1 | 31 | 31 | 7 | 3 | ..... | 4 | 2 | 81 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |
| Delaware, Lackawanna and Western Railroad Co. | Delaware | 1 | ..... | 2 | 43 | 65 | 2 | ..... | 1 | 9 | ..... | 113 | ..... | ..... | 11 | ..... | ..... | ..... | ..... | ..... | 8 | 19 | 132 | |
| Totals | | 28 | 17 | 180 | 3,316 | 2,414 | 960 | 473 | 77 | 1,067 | 649 | 9,092 | 2 | 53 | 129 | 382 | 327 | 166 | 48 | 1,354 | 3,371 | 11,463 | | |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|------------------------------|-------------------------|------------------|----------------|-----|-------------------|------------------|-------------------|---------------------------------|------------|---|
| | | | | | | | | | | |
| Jan. | 4 Benjamin Mikas, | Lithuanian. | Miner, | 21 | S. | .... | .... | Baltimore No. 5, | Luzerne... | Fatally burned by explosion of powder in chamber. |
| 6 David Price, | Welsh, | Runner, | 28 | M. | 1 | 5 | .... | Dorrence, | | Killed by cars on gangway. |
| 8 John Struck, | Austrian, | Miner, | 31 | M. | 1 | 1 | .... | Baltimore Tunnel, | | Killed by fall of coal at pillar work. |
| 23 William Turkavicz, | Lithuanian, | Laborer, | 29 | S. | .... | .... | .... | Hollenback No. 2, | | Killed by fall of slate at face of chamber. |
| 25 Mike Kavka, | Slavonian, | Timberman, | 42 | S. | .... | .... | .... | Prospect, Wilkes- | | Killed by prop falling on him in chamber. |
| 26 Felix Kereseky, | Polish, | Rockman, | 30 | S. | .... | .... | .... | Barre No. 2, | | Killed by fall of roof at face of chamber. |
| Feb. | 4 Frank Zudlana, | Polish, | Miner, | 26 | M. | 1 | .... | Hollenback No. 2, | Luzerne... | Killed by fall of slate at face of chamber. |
| 6 John Lackavage, | Russian, | Miner, | 29 | M. | 1 | 5 | .... | .... |  | Killed by explosion of gas in chamber. A rush of coal occurred, the effect to a ship or gas pressure, and the force of the explosion caused a distance of 155 feet to be run, a distance of 155 feet to the miners' box, where it came in contact with John Lackavage's open light. The other men and boys were on their way down the branch to eat their lunch when they were caught by the force of the explosion. A description of this accident is given in the preliminary part of the report. |
| 17 Thomas Barszayayer, | Austrian, | Miner, | 42 | S. | .... | .... | .... | Prospect, | | Fatally burned by explosion of gas in chamber. |
| 18 Daniel Soudak, | Austrian, | Laborer, | 51 | M. | 1 | .... | .... | .... |  | Killed by fall of slate at face of chamber. |
| 19 John Gielash, | Austrian, | Laborer, | 54 | M. | 1 | .... | .... | .... |  | Fatally injured by cars on gangway. |
| 20 John Gielash, | Austrian, | Laborer, | 54 | M. | 1 | .... | .... | .... |  | Killed by explosion of gas in chamber. |
| 21 Patrick Gavin, | American, | Miner, | 18 | S. | .... | .... | .... | .... |  | Killed by explosion of blast at face of chamber. |
| 22 John Sevenak, | Slavonian, | Runner, | 19 | S. | .... | .... | .... | .... |  | Fatally injured by explosion of blast at face of chamber. |
| 24 Bruno Owens, | American, | Runner, | 22 | S. | .... | .... | .... | .... |  | Killed by fall of slate at face of chamber. |
| 25 Bruno Leschinsky, | American, | Driver, | 18 | S. | .... | .... | .... | .... |  | Killed by fall of coal at face of chamber. |
| 1 Mike Michals, | American, | Driver, | 18 | S. | .... | .... | .... | .... |  | Fatally injured by cars on slope. |
| 1 August Wolgost, | American, | Doorway, | 18 | S. | .... | .... | .... | .... |  | Killed by explosion of gas in chamber. |
| 23 Thomas Polkias, | Lithuanian, | Runner, | 17 | S. | .... | .... | .... | Henry, | | Killed by explosion of blast at face of chamber. |
| March | 3 Mike Muscavage, | Russian, | Laborer, | 27 | S. | .... | .... | Henry, | Luzerne... | Fatally injured by explosion of blast at face of chamber. |
| 10 Martin Knoski, | Polish, | Miner, | 27 | M. | 1 | 3 | .... | Stanton No. 7, | | Killed by fall of slate at face of chamber. |
| 25 Michael Danko, | Russian, | Laborer, | 34 | M. | 1 | 1 | .... | Prospect, | | Killed by fall of slate at face of chamber. |
| 27 John Lawrence, | Slavonian, | Miner, | 51 | M. | 1 | .... | .... | Franklin, | | Fatally injured by cars on slope. |
| April | 6 Harry Oliniski, | Polish, | 45 | M. | 1 | .... | .... | Henry, | | Killed by explosion of gas in chamber. |
| 8 John Mosick, | Russian, | Laborer, | 45 | M. | 1 | 3 | .... | Maxwell No. 20, | | Killed by explosion of blast at face of chamber. |
| 9 John Sulace, | Polish, | Laborer, | 37 | M. | 1 | .... | .... | Hillman Vehn, | | Killed by explosion of blast at face of chamber. |
| 13 John Grabe, | German, | Miner, | 30 | M. | 1 | .... | .... | .... |  | Killed by explosion of blast at face of chamber. |
| 13 Alok Karbowski, | Polish, | Miner, | 26 | M. | 1 | .... | .... | South Wilkes-Barre No. 5, | | Killed by explosion of blast at face of chamber. |

TABLE 4.—Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|-------|-----------------------------|----------------|-----------------|-----|-------------------|------------------|-------------------|-------------------|--------------|---|
| April | 19. Michael Fedor, | American, .. | Engineer, | 21 | S. | ... | ... | Red Ash No. 2,... | Luzerne, ... | Killed by cars on ash bank. Outside. |
| May | 1. Frank Scrobiniski, | Lithuanian, .. | Laborer, | 52 | M. | 1 | 2 | Stanton No. 7,... | | Killed by fall of roof at face of chamber. |
| | 3. John Daviditus, | Lithuanian, .. | Engineer, | 49 | S. | ... | ... | South Wilkes | | Killed by cars in tunnel. |
| | 6. James Hendy, | English, ... | Assistant fore- | 44 | M. | 1 | 1 | Barre No. 5, | | Killed by cars on slope. |
| | 7. Edwin Partt, | English, ... | man | 48 | S. | ... | ... | Franklin, | | |
| | Anthony Jankowsky, | Polish, | Rockman, | 48 | S. | ... | ... | Pottelone No. 3, | | Killed by falling down shaft. |
| | Peter Rabis, | Polish, | Laborer, | 21 | S. | ... | ... | Maxwell No. 3, | | Killed by fall of coal at face of chamber. |
| | Lazarus Williams, | Russian, | Miner, | 49 | M. | 1 | 1 | Baltimore No. 5, | | Killed by fall of coal at face of chamber. |
| June | 7. Thomas Kapa, | American, .. | Rockman, .. | 39 | M. | 1 | 1 | Pottelone No. 4, | | Killed by falling down shaft. |
| | 11. William Harris, | Polish, | Miner, | 31 | M. | 1 | 4 | Baltimore No. 5, | | Killed by explosion of blast at face of chamber. |
| | John Massman, | Welsh, | Laborer, | 69 | M. | 1 | ... | Stanton No. 7,... | Luzerne, ... | Killed by cars in chamber. |
| July | 14. Joseph Wazlavack, ... | German, | Foreman, | 67 | M. | 1 | 1 | Dorrance, | | Killed by cars while attempting to cross tracks. Outside. |
| | 15. John Poporga, | German, | Miner, | 51 | M. | 1 | 4 | Franklin, | | Killed by explosion of blast at face of chamber. |
| Aug. | 21. John Brown, | Russian, | Laborer, | 95 | M. | 1 | 2 | Prospect, | | Killed by fall of coal at face of chamber. |
| | 7. Stanley Kovaskie, | American, ... | Driver, | 18 | S. | ... | ... | Maxwell No. 5, | | Killed by cars on gangway. |
| | 12. Peter Kubile, | Austrian, ... | Laborer, | 27 | M. | 1 | 1 | Prospect, | | Killed by fall of slate at face of chamber. |
| | 14. Charles McDewitt, ... | German, | Miner, | 57 | S. | ... | ... | Prospect, | | Killed by fall of coal at face of chamber. |
| | 17. John Samonskie, | Irish, | Laborer, | 73 | M. | 1 | ... | Franklin, | | Killed by cars in drift. |
| Sept. | 13. John Zariski, | Polish, | Miner, | 27 | S. | ... | ... | Franklin, | | Killed by fall of slate at face of chamber. |
| | 14. Andrew Tompko, | Polish, | Laborer, | 36 | M. | 1 | 3 | Stanton No. 7,... | | Killed by fall of roof at face of chamber. |
| | 21. Michael Ameko, | Austrian, ... | Engineer, | 44 | M. | 1 | 4 | Franklin, | | Killed by falling under lokie. Outside. |
| | George Fending, | Austrian, ... | Miner, | 30 | M. | 1 | 1 | Miners Mills, ... | | Killed by explosion of blast at face of chamber. |
| | Steve Boginski, | Austrian, ... | Miner, | 27 | M. | 1 | 5 | Baltimore Tunnel, | Luzerne, ... | Killed by fall of coal on pillar work. |
| | Frank Lapinski, | Russian, | Laborer, | 24 | S. | ... | ... | Stanton No. 7,... | | Killed by fall of roof at face of chamber. |
| | Harry Emerish, | Polish, | Miner, | 23 | M. | 1 | 3 | Hollenback No. 2, | | Fatally injured. Struck on head by windlass at face of chamber. |
| Oct. | 11. Harry Emerish, | American, .. | Louder, | 43 | S. | ... | ... | Stanton No. 7,... | | Killed by railroad cars under breaker. Out- |
| | Michael McLaughlin, ... | American, ... | Driver, | 23 | S. | ... | ... | Maxwell No. 20, | | Killed by explosion of blast at face of chamber. |

| | | | | | | | | | | |
|---------|-----------------------|----------------|-----------------|----|----|------|------|----------------------|--|----------|
| Nov. 3 | Silas Williams, | Welsh, | Engineer, | 23 | S. | .... | .... | Red Ash No. 2, .. | Killed by cars on stripping. | Outside. |
| 10 | Joseph Wajacks, | American, .. | Driver, | 20 | S. | .... | .... | Franklin, | Killed by explosion of blast at face of chamber. | |
| 19 | Charles Mucavage, .. | Lithuanian, .. | Miner, | 28 | M. | 1 | .... | Dorrance, | Killed by explosion of blast at face of chamber. | |
| 24 | Simon Gudy, | Lithuanian, .. | Miner, | 50 | M. | 1 | .... | Franklin, | Killed by fall of roof at face of chamber. | |
| 29 | Edward Steward, | English, .. | Rockman, | 26 | S. | .... | .... | Hollenback No. 2, .. | Killed by explosion of blast at face of tunnel. | |
| | Andrew Morton, | Lithuanian, .. | Laborer, | 23 | S. | .... | .... | Hollenback No. 2, .. | Killed by explosion of blast at face of tunnel. | |
| Dec. 10 | Charles Yokowskie, .. | Austrian, .. | Miner, | 30 | M. | 1 | .... | Prospect, | Killed by explosion of blast at face of chamber. | |
| 14 | Michael Siner, | Polish, | Laborer, | 49 | M. | 1 | 2 | Maxwell No. 20, .. | Struck by piece of coal that slid down chute. | |
| 24 | Andrew Galigka, | Polish, | Miner, | 23 | M. | 1 | 5 | Baltimore No. 5, .. | Killed by explosion of blast at face of chamber. | |

Luzerne, ...

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|-------|---------------------------|----------------|--------------------|-----|-------------------|--------------------------|----------------|---|
| Jan. | 5 Victor Kataraka, | Polish, | Miner, | 25 | M. | Stanton No. 7, | Luzerne, | Face and hands burned by explosion of gas in chamber. |
| | 6 John Suizenfero, | American, .. | Laborer, | 29 | S. | Stanton No. 7, | | Face and hands burned by explosion of gas in chamber. |
| | 7 Benjamin Gronscki, | Polish, | Miner, | 30 | M. | South Wilkes-Barre No. 5 | | Head injured by debris falling down shaft. |
| | 8 John P. Ojitski, | Polish, | Miner, | 40 | M. | Stanton No. 7, | | Ribs fractured by fall of roof at face of chamber. |
| | 11 John Slowski, | Polish, | Runner, | 17 | S. | Hollenback No. 2, | | Legs fractured. Kicked by a mule on gangway. |
| | 21 Christ Fugavit, | German, | Miner, | 39 | M. | Stanton No. 7, | | Face and hands burned by explosion of gas in chamber. |
| | Joseph Zuiks, | Lithuanian, .. | Laborer, | 23 | S. | Stanton No. 7, | | Face and hands burned by explosion of gas in chamber. |
| | 25 Michael Miller, | Lithuanian, .. | Miner, | 54 | M. | Hollenback No. 2, | | Back bruised by fall of slate at face of chamber. |
| | 27 Stephen Papoga, | Polish, | Miner, | 38 | M. | Baltimore No. 5, | | Leg fractured by fall of coal at face of chamber. |
| | 30 Thomas Kennedy, | American, .. | State-picketer, .. | 15 | S. | Sugar Notch No. 9, | | Ribs fractured by machinery in breaker. Outside. |
| Feb. | 2 Martin Toole, | American, .. | Jig runner, | 21 | S. | Sugar Notch No. 9, | | Small bones in foot fractured by machinery. |
| | 3 Felix Freeman, | Polish, | Loader, | 26 | S. | South Wilkes-Barre No. 5 | | Hand fractured by falling off car. Outside. |
| | 4 John Jeroski, | Austrian, | Laborer, | 50 | M. | Prospect, | | Body fractured by explosion of blast at face of chamber. |
| | 15 Charles Blywick, | Polish, | Miner, | 66 | M. | Dorrance, | | Leg fractured by fall of roof at face of chamber. |
| | 17 Frank Koboiko, | Polish, | Miner, | 35 | M. | Prospect, | | Foot bruised by fall of coal on gangway. |
| | Frank Metz, | American, .. | Driver, | 18 | S. | Prospect, | | Body bruised by explosion of gas on gangway. |
| March | 6 Edward McCloskey, | American, .. | Dumper, | 19 | S. | Empire Washery, | | Finger cut off by cars. Outside. |
| | 9 George Kecher, | Russian, | Miner, | 55 | S. | Henry, | | Body bruised by fall of slate at face of |
| | John Sackalskie, | Polish, | Miner, | 27 | S. | Franklin, | | Skull fractured by cars on gangway. |
| | 16 Frank Fantska, | Polish, | Miner, | 32 | M. | South Wilkes-Barre No. 5 | | Skull fractured by explosion of blast at face of chamber. |

| | | | | | | | |
|----------|---------------------------|----------------|-------------------|----|----|--------------------------|--|
| March 18 | Joseph Tomechick, | Polish, | Miner, | 36 | M. | Dorrance, | Body bruised by explosion of blast at face of chamber. |
| 20 | Martin Hoffman, | American, .. | Table cleaner, .. | 26 | S. | Baltimore Tunnel, | Face burned by electric wire. Outside. |
| 23 | Thomas E. Price, | Welsh, | Laborer, | 36 | M. | South Wilkes-Barre No. 5 | Face burned by explosion of gas in cross-cut. |
| 25 | David Williams, | Welsh, | Engineer, | 35 | M. | Hollenback No. 2, | Hand cut off by machinery. Outside. |
| 26 | Frank Robertske, | Slavonian, .. | Laborer, | 33 | M. | Stanton No. 7, | Face burned by explosion of gas at face of chamber. |
| April 7 | Joseph Kosceck, | Russian, | Driver, | 18 | S. | Henry, | Arm fractured by cars on plane. |
| 8 | Worceck Slogloff, | Polish, | Miner, | 45 | M. | Franklin, | Body bruised by explosion of blast at face of chamber. |
| 9 | Thomas Toole, | Irish, | Miner, | 53 | M. | Maxwell No. 20, | Body burned by explosion of gas at face of chamber. |
| 10 | Peter Rasienomuz, | Polish, | Miner, | 42 | M. | Sugar Notch No. 9, | Finger cut off by piece of coal sliding on him in chamber. |
| | Charles Callanaha, | Polish, | Miner, | 34 | M. | Stanton No. 7, | Leg fractured by explosion of blast at face of chamber. |
| 16 | John S. Davis, | American, .. | Laborer, | 24 | M. | Stanton No. 7, | Collar bone fractured by cars on roadway. |
| 17 | George Varaske, | Slavonian, .. | Laborer, | 66 | M. | Baltimore Tunnel, | Ribs fractured by fall of roof on pillar work. |
| 19 | John Sontis, | Russian, | Footman, | 38 | S. | Dorrance, | Ankle fractured by prop falling on him on slope. |
| 22 | Stanley Sortika, | Polish, | Miner, | 32 | S. | Sugar Notch No. 9, | Arm fractured by explosion of blast at face. |
| 24 | Anthony Staurits, | Lithuanian, .. | Miner, | 45 | M. | Stanton No. 7, | Ribs fractured by explosion of blast at face of chamber. |
| | Michael Cove, | Irish, | Runner, | 37 | S. | Franklin, | Face burned by explosion of gas on plane. |
| | John Fulelock, | Polish, | Laborer, | 33 | M. | Franklin, | Face burned by explosion of gas on plane. |
| 25 | William Rudlick, | English, | Miner, | 37 | M. | Hollenback No. 2, | Ribs fractured by fall of slate at face of chamber. |
| 27 | Enoch C. Williams, | Welsh, | Miner, | 53 | M. | Maxwell No. 20, | Arm fractured by fall of coal at face of chamber. |
| May 4 | George Movach, | Polish, | Laborer, | 27 | S. | Sugar Notch No. 9, | Foot fractured by fall of slate on plane. |
| 6 | Edward Conway, | American, .. | Driver, | 18 | S. | Maxwell No. 20, | Squeezed about abdomen by cars on gauge way. |
| 7 | Charles Ostrowskie, | Polish, | Miner, | 46 | M. | Dorrance, | Skull fractured by cars on slope. |
| | Edward McAllick, | Irish, | Laborer, | 40 | M. | Baltimore No. 5, | Head and hands burned by explosion of gas at face of chamber. |
| | Patrick Conwell, | Irish, | Laborer, | 50 | M. | Baltimore No. 5, | Face and hands burned by explosion of gas at face of chamber. |
| 10 | Andrew Harock, | Slavonian, .. | Timberman, .. | 28 | M. | Red Ash No. 2, | Back lacerated by being struck by timber in chamber. |
| 18 | Frank Daniels, | Lithuanian, .. | Miner, | 50 | M. | Prospect, | Foot bruised by fall of coal at face of chamber. |
| | George Petroskie, | Slavonian, .. | Miner, | 54 | M. | Maxwell No. 20, | Leg fractured by explosion of blast at face of chamber. |
| | Joseph Gobbler, | Lithuanian, .. | Miner, | 38 | M. | South Wilkes-Barre No. 5 | Hand lacerated by explosion of blast at face of chamber. |
| 19 | John Gallo, | Austrian, .. | Miner, | 29 | M. | Henry, | Leg fractured by explosion of blast at face of chamber. |
| 22 | John Struski, | Lithuanian, .. | Laborer, | 40 | M. | Stanton No. 7, | Thigh bruised. Struck by a piece of coal while standing on loading platform. |

Luzerne, ..

TABLE 5 —Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|-------------------------|----------------|-----------------|-----|-------------------|--------------------------|--------------|---|
| June 22 | Joseph Rlusaitus, | Lithuanian. | Miner, | 40 | M. | South Witkes-Barre No. 5 | | Skull fractured by explosion of blast at face of chamber. |
| 23 | Peter Parniczek, | Polish, | Miner, | 38 | M. | Stanton No. 7, | | Foot fractured by fall of roof at face of chamber. |
| July 10 | John Barick, | Polish, | Miner, | 28 | M. | Maxwell No. 20, | | Hands and face burned by explosion of gas at face of chamber. |
| 15 | Louis Zubrick, | Polish, | Laborer, | 25 | S. | Maxwell No. 20, | | Face burned by explosion of gas at face of chamber. |
| 21 | Wassil Lulruskie, | Russian, .. | Miner, | 32 | S. | Prospect, | | Ribs fractured by fall of coal at face of chamber. |
| 22 | John Hanzu, | Slavonian, .. | Miner, | 44 | M. | Baltimore No. 5, | | Knee fractured by explosion of blast at face of chamber. |
| 27 | John Nacada, | Polish, | Laborer, | 24 | S. | Baltimore No. 5, | | Knee fractured by cars on gangway. |
| 30 | Caustine Obliska, | Polish, | Miner, | 35 | M. | Stanton No. 7, | | Leg fractured by explosion of blast at face of chamber. |
| Aug. 6 | Simon Grablowski, ... | Lithuanian, .. | Miner, | 50 | M. | Maxwell No. 20, | | Ribs fractured by prop falling on him at face of chamber. |
| 9 | Joseph Gablueski, | Polish, | Miner, | 44 | M. | Hillman Veb, | Luzerne, ... | Leg and arm fractured by explosion of blast at face of chamber. |
| 18 | John Robel, | Polish, | Laborer, | 30 | M. | Maxwell No. 20, | | Leg fractured by loose coal rolling on him at face of chamber. |
| 20 | Charles Richard, | German, | Laborer, | 55 | M. | Dorrance, | | Leg fractured by being struck by a lever at face of chamber. |
| 23 | Robert Miles, | American, ... | Craneman, | 42 | M. | Empire Washery, | | Elbow fractured by falling off a steam shovel, Outside. |
| 26 | Paul Sosnoski, | Polish, | Miner, | 26 | M. | Maxwell No. 20, | | Face and hands burned by explosion of gas in cross-cut. |
| | Andrew Tomales, | Lithuanian, .. | Laborer, | 27 | S. | Maxwell No. 20, | | Face and hands burned by explosion of gas in cross-cut. |
| Sept. 7 | August Smith, | Lithuanian, .. | Miner, | 43 | M. | Sugar Notch No. 9, ... | | Arm fractured by explosion of blast at face of chamber. |
| 8 | William Wisneffskie, .. | Polish, | Driver, | 24 | M. | Henry, | | Ribs fractured by being kicked by a mule in face of chamber. |
| | Joseph Yakinaites, ... | Lithuanian, .. | Miner, | 36 | M. | Sugar Notch No. 9, ... | | Fingers cut off by piece of coal rolling on him in chamber. |
| 9 | Michael Maronowek, ... | Russian, ... | Laborer, | 30 | M. | Prospect, | | Pelvis and wrist fractured by fall of coal at face of chamber. |

| | | | | | | | |
|-------|----|-------------------------|-------------------|--------------------|-------|---------------------------------|---|
| Sept. | 6 | Daniel Callahan, | Irish, | Footman, | 27 M. | Hollenback No. 2, | Chest squeezed between car and rib on plane. |
| | 20 | James Dougherty, | Irish, | Miner, | 39 M. | Baltimore Tunnel, | Leg bruised by cars on slope. |
| | | Patrick Fay, | Irish, | Laborer, | 40 M. | Baltimore Tunnel, | Head bruised by fall of coal at face of chamber. |
| | | Peter Maskotes, | Lithuanian, | Miner, | 46 M. | Baltimore Tunnel, | Ankle fractured by fall of roof at face of chamber. |
| | 21 | John Morris, | American, | Pumpman, | 28 S. | Warrior Run, | Ankle fractured by fall of roof at face of chamber. |
| | | Patrick Brislin, | Irish, | Mason, | 55 M. | Warrior Run, | Ankle fractured by fall of roof at face of chamber. |
| | 22 | Michael Velches, | Polish, | Laborer, | 21 S. | Franklin, | Leg fractured by fall of roof at face of side. |
| | 23 | Michael Morechan, | Greek, | Laborer, | 42 M. | Empire Washery, | Leg fractured by cars on culm bank. Outside. |
| | 28 | George Sokol, | Russian, | Miner, | 25 S. | Dorance, | Leg fractured by fall of coal at face of chamber. |
| | 29 | John Washaskie, | Polish, | Miner, | 25 M. | Sugar Notch No. 9, | Face and hands burned by explosion of gas in chamber. |
| Oct. | 2 | Joseph Redovleth, | Russian, | Miner, | 29 M. | Dorance, | Leg fractured by fall of coal at face of chamber. |
| | | Frank Grant, | Italian, | Laborer, | 28 M. | Stanton No. 7, | Ankle fractured by cars under breaker. Outside. |
| | 4 | Andrew Witka, | Russian, | Miner, | 38 M. | Hollenback No. 2, | Body bruised by explosion of blast at face of chamber. |
| | 5 | James Ashford, | English, | Laborer, | 74 M. | Baltimore No. 5, | Ankle fractured by cars on gangway. |
| | 6 | George Codrigo, | Slavonian, | Miner, | 48 M. | Hollenback No. 2, | Body bruised by explosion of blast at face of chamber. |
| | 13 | Henry Williams, | Welsh, | Rope-slicer, | 43 S. | Maxwell No. 20, | Leg fractured by being struck by a rope on plane. |
| | 20 | Adam Grayaskie, | Lithuanian, | Miner, | 38 M. | Maxwell No. 20, | Head and face burned by explosion of gas at face of chamber. |
| | | Joseph Demans, | Lithuanian, | Laborer, | 18 S. | Maxwell No. 20, | Hands and face burned by explosion of gas at face of chamber. |
| | 21 | Heromen Kleposki, | Russian, | Miner, | 52 M. | South Wilkes-Barre No. 5, | Thigh fractured by fall of roof at face of chamber. |
| | 25 | Anthony Hudeck, | Slavonian, | Laborer, | 29 M. | Prospect, | Knee fractured by cars at foot of shaft. |
| | 30 | Joseph Tonske, | Polish, | Miner, | 29 S. | South Wilkes-Barre No. 5, | Severely injured about body by explosion of blast at face of chamber. |
| Nov. | 5 | Joseph Scritzke, | Russian, | Runner, | 20 S. | Henry, | Polys fractured by cars in chamber. |
| | 8 | Arthur Thomas, | American, | Driver, | 25 S. | South Wilkes-Barre No. 5, | Leg fractured by cars on gangway. |
| | | Andrew Konik, | American, | Engineer, | 23 S. | Dorance, | Legs bruised by fall of coal at face of chamber. |
| | 13 | Casmer Kratsmues, | Lithuanian, | Miner, | 52 M. | Baltimore No. 5, | Leg fractured by fall of coal at face of chamber. |
| | 15 | John Babala, | Polish, | Miner, | 23 M. | Stanton No. 7, | Fingers cut off by an axe in airway. |
| | 22 | Andrew Frantz, | Austrian, | Loader, | 44 M. | Franklin, | Head bruised by falling off railroad car. Outside. |
| | 26 | Martin Polniskes, | Polish, | Miner, | 45 M. | Prospect, | Leg and arm fractured by fall of roof at face of chamber. |
| Dec. | 3 | Michael Murray, | American, | Slatepicker, | 44 S. | Baltimore Tunnel, | Wrist fractured by falling while trying to get on a box car. Outside. |
| | 6 | John McBride, | Polish, | Runner, | 25 S. | Hollenback No. 2, | Finger crushed by falling on gangway. |
| | 8 | Adam Frankoskie, | Polish, | Miner, | 26 M. | Red Ash No. 2, | Leg fractured by laying coal from a run-away trip on gangway. |

Lazorne, ..

TABLE 5. Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|--------|-----------------------|---------------|-------------------|-----|-------------------|-------------------------|--------------|--|
| Dec. 9 | Adam Gawronsky, ... | Polish, | Miner, | 41 | M. | Stanton No. 7, | | Toes crushed by piece of coal rolling on him in chamber. |
| 13 | Charles Lloyd, | Welsh, | Machineist, | 42 | M. | Hollenback No. 2, | Lucerne, ... | Skull fractured. Struck by piece of coal that fell from ascending cage. Outside. |
| 26 | John Washonick, | Austrian, .. | Miner, | 23 | M. | Maxwell No. 24, | | Leg fractured by fall of coal at face of chamber. |
| 31 | John Todd, | American, .. | Headman, | 24 | S. | Sugar Notch No. 9, | | Toe fractured by piece of coal falling on him. Outside. |

CONDITION OF COLLIERIES

LEHIGH AND WILKES-BARRE COAL COMPANY

Hollenback No. 2, South Wilkes-Barre No. 5, Stanton No. 7, Sugar Notch No. 9 and Maxwell No. 20 Collieries.—Ventilation, roads, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Franklin, Dorrance, Prospect, Henry and Warrior Run Collieries.—Ventilation, roads, drainage and condition as to safety, good.

DELAWARE AND HUDSON COMPANY

Baltimore No. 5 and Baltimore Tunnel Collieries.—Ventilation, roads, drainage and condition as to safety, good.

WILKES-BARRE ANTHRACITE COAL COMPANY

Hillman Vein Colliery.—Ventilation, roads, drainage and condition as to safety, good.

RED ASH COAL COMPANY

Red Ash Nos. 1 and 2 Collieries.—Ventilation, roads and drainage, fair. Condition as to safety, good.

PITTSTON COAL MINING COMPANY

Hadleigh Colliery.—Ventilation, roads and drainage, fair. Condition as to safety, good.

CAMPBELL AND JOHNS

Miners Mills Colliery.—Ventilation, roads and drainage, fair. Condition as to safety, good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone Nos. 3 and 4 Collieries.—Ventilation, roads, drainage and condition as to safety, good.

IMPROVEMENTS

LEHIGH AND WILKES-BARRE COAL COMPANY

Hollenback No. 2 Colliery.—Inside: Completed No. 39 tunnel, Baltimore to five foot; tunnel, Ross to Red Ash, 5th East, No. 6 plane; No. 41 tunnel, Hillman to Kidney; and No. 42 tunnel, Stanton to Five Foot vein.

Outside: Installed a 24 by 48 inch hoisting engine for No. 3 plane.

South Wilkes-Barre No. 5 Colliery.—Completed No. 32 tunnel, Abbott to Hillman; rock plane, Hillman to Kidney; and No. 33 tunnel, Stanton to Baltimore vein.

Stanton No. 7 Colliery.—Completed No. 20 tunnel, Abbott to No. 1 vein; rock plane, Abbott to No. 1 vein; No. 21 tunnel, Top Red

Ash to Ross; rock plane, Hillman to No. 17 tunnel; tunnel, Abbott to Abbott, 1st East; No. 22 tunnel, Top to Bottom Red Ash; tunnel, Ross to Top Red Ash, and No. 23 tunnel, Abbott to Kidney vein. Extended No. 17 tunnel to Kidney. Drove 10-inch bore hole to the Baltimore vein.

Sugar Notch No. 9 Colliery.—Completed No. 31 tunnel. Twin to Hillman, and a tunnel from Station to Five Foot vein.

Maxwell No. 20 Colliery.—Completed a tunnel from Red Ash to Red Ash, and No. 31 tunnel, Red Ash to Ross vein.

Empire Washery.—Installed pea and chestnut spirals.

LEHIGH VALLEY COAL COMPANY

Dorrance Colliery.—Inside: Two electric motors were placed in service in the Lance, Cooper and Bennett veins. A 4-inch drainage bore-hole was drilled from the Baltimore to the Red Ash to drain silt water. No. 26 tunnel was driven from the Bowkley to Abbott vein, 210 feet long. No. 27 tunnel was driven from No. 21 tunnel into Lance vein. No. 24 slope, in the Red Ash vein, was graded and tunnel commenced through the anticlinal at the foot of the slope, in order to facilitate haulage. Completed No. 24 haulage, Cooper to Lance vein.

Outside: Installed an additional 300 horse power boiler in boiler plant. A spray system was placed in breaker, and a pump installed, and pump line laid from pump to breaker, and pump house erected near reservoir. The construction of a steel fuel conveyor was continued. A fence was built around tracks, and bridge constructed over tracks near head of shaft for traveling way and safety.

Prospect Colliery.—Electric cables in shaft were renewed. Considerable grading was done at the head of Nos. 26 and 29 slopes in the Skidmore vein. A 15-degree rock slope, 80 feet long, was sunk through fault from Lower Baltimore to Upper Baltimore vein, for a return airway. Two bore holes were drilled from the Five Foot vein to drain water from Prospect Hillman slope workings to the Oakwood pump. Edison electric safety lamps were purchased for use in the Red Ash vein. Concrete and steel timbering at foot of Red Ash shaft continued.

Outside: Steam lines were recovered. The fuel line from breaker to boiler house was rebuilt. A new roof was placed on the boiler house. The supply yard was rearranged. Steel bents were put under main conveyor from the Prospect shaft to the head of the breaker. A condenser was placed in the river pump-house. The old boiler house at Oakwood shaft was remodeled for a washhouse and lamphouse.

Henry Colliery.—No. 74 tunnel from the Hillman to the Bowkley vein was completed, and a 30-degree rock plane 152 feet long was driven for a second opening. A 45-degree rock plane was driven from the Five Foot to the Hillman vein, the Wyoming Five Foot slope, for a return airway, and to improve the ventilating conditions. The concrete hospital at the head of No. 11 slope was completed. A concrete roof was constructed over the barn in the Red Ash vein, west of the shaft. A 10-degree rock plane, from the Five Foot to the Hillman vein, was started. An air shaft was sunk and concreted to the Hillman vein, Prospect slope, for an intake. Considerable rock grading was done on No. 39 slope in the Skidmore vein, to improve haulage conditions. The Henry shaft was abandoned.

Outside: Constructed a concrete and hollow tile washhouse for employes. Installed a silent chain for operating the overwinding device on the shaft engine. A feed pump of large capacity was installed in the boiler house, and covered the feed water lines. Completed a concrete curbing around the colliery yard.

PITTSTON COAL MINING COMPANY

Hadleigh Colliery.—Outside: Completed an 8-inch steam line, 400 feet long, equipped with steel flanges, from boiler house to shaft engines and breaker. All lines have been covered with 8 per cent. magnesia covering. Boilers have been reconstructed and rebuilt. Installed small conveyor line for conveying fuel to boiler house. Also installed one GE D. C. current generator, type MP, connected to Harrisburg engine, and one 9 by 14 inch saddle tank locomotive. Constructed a brick building 18 by 60 feet, for generator room, supply store and office. Also reconstructed ambulance house. Completed a 4 inch line 1200 feet long, for fresh water supply to boiler house.

Inside: Installed electric lights throughout the mines; also two 7-ton Baldwin electric locomotives, with overhead trolley; and hung 6000 feet of 2-0 trolley wire. Bonded all rails where locomotives travel. Installed one 100-II. P. D. C. Lidgerwood electric hoist on Red Ash slope, one Goyne duplex plunger pump at foot of Twin slope, and one Scranton duplex plunger pump at foot of Red Ash slope.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone Nos. 3 and No. 4 Collieries.—Completed the shafts to the Red Ash vein, a depth of 1086 feet and 1098 feet. Installed the necessary hoisting equipment and ventilating fans.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held May 18 and 19 in the Y. M. C. A. Building, Wilkes-Barre. The Board of Examiners was composed of Thomas J. Williams, Mine Inspector; Samuel R. Morgan, Superintendent, Wilkes-Barre; Patrick McGrane, Miner, Sugar Notch; William H. Chappell, Miner, Wilkes-Barre.

The following persons passed a satisfactory examination and were granted certificates.

MINE FOREMEN

Josiah Beech, Alfred W. Davis, Lewis J. Jenkins, Edmund P. Thomas, Edwardsville; Edward Finn, Thomas A. Welch, Wilkes-Barre; George McKechnie, Courtdale; William James Williams, Parsons; John Wordoski, Peely; Charles D. Dare, Larksville.

ASSISTANT MINE FOREMEN

Edwin B. Charlton, John Crawford, Corey Cannon, David R. Evans, Edward Griffiths, Charles F. Hoffman, John Kovalick, James G. Morgan, James J. McGrath, Roger Sayes, Wilkes-Barre; Daniel Blaine, Larksville; John Bonsall, Plains; John Morris, William Price, Edwardsville; Leonard Payne, Askam.



EIGHTH DISTRICT

LUZERNE AND LACKAWANNA COUNTIES

Pittston, Pa., February 18, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith the annual report of the Eighth Anthracite District for the year ending December 31, 1915.

Respectfully submitted,

S. J. JENNINGS,

Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 15 |
| Number of mines, | 32 |
| Number of mines in operation, | 27 |
| Number of tons of coal shipped to market, | 3,226,006 |
| Number of tons used at mines for steam and heat, | 430,858 |
| Number of tons sold to local trade and used by employes, | 96,764 |
| Number of tons produced, | 3,753,628 |
| Number of tons produced by compressed air machines, | 107,148 |
| Number of tons produced by electrical machines, | 6,749 |
| Number of persons employed inside of mines, | 1,973 |
| Number of fatal accidents inside of mines, | 22 |
| Number of fatal accidents outside, | 2 |
| Number of non-fatal accidents inside of mines, | 29 |
| Number of non-fatal accidents outside, | 8 |
| Number of tons of coal produced per fatal accident inside, | 170,619 |
| Number of tons produced per fatal accident outside, .. | 1,876,814 |
| Number of tons produced per fatal accident inside and outside, | 156,401 |
| Number of persons employed per fatal accident inside, .. | 307 |
| Number of persons employed per fatal accident outside, .. | 986 |
| Number of persons employed per fatal accident inside and outside, | 363 |
| Number of persons employed per non-fatal accident inside, | 233 |
| Number of persons employed per non-fatal accident outside, | 246 |
| Number of persons employed per non-fatal accident inside and outside, | 236 |
| Number of wives made widows, | 17 |
| Number of children made orphans, | 46 |
| Number of steam locomotives used inside of mines,.... | 1 |
| Number of steam locomotives used outside, | 13 |
| Number of compressed air locomotives used inside, | 6 |
| Number of compressed air locomotives used outside, ... | 32 |
| Number of electric motors used inside, | 32 |
| Number of electric motors used outside, | 32 |
| Number of gasoline locomotives used inside, | 32 |
| Number of fans in use, | 32 |
| Number of furnaces in use, | 17 |
| Number of gaseous mines in operation, | 10 |
| Number of non-gaseous mines in operation, | 10 |
| Number of new mines opened, | 10 |
| Number of old mines abandoned, | 10 |

TABLE A
PRODUCTION OF COAL

| Names of Operators | Tons |
|--|------------------|
| Lehigh Valley Coal Company, | 1,600,081 |
| Forty Fort Coal Company, | 590,832 |
| Kingston Coal Company, | 493,235 |
| Mt. Lookout Coal Company, | 357,033 |
| East Boston Coal Company, | 210,515 |
| Haddock Mining Company, | 191,652 |
| Raub Coal Company, | 167,540 |
| Delaware, Lackawanna and Western Railroad Company, | 103,525 |
| Campbell, Johns and Company, | 39,215 |
| Total, | 3,753,628 |

| Production by Counties | |
|------------------------|------------------|
| Luzerne, | 3,665,026 |
| Lackawanna, | 88,602 |
| Total, | 3,753,628 |

TABLE B.—Fatal and non-fatal accidents inside and outside of mine s; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|--------------------------|-----------------|---------|-------|---------------------|---------|-------|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | |
| High Valley Coal Co., | 9 | 1 | 15 | 13 | 2 | 15 | 177,787 | 2,528 | 733 | 3,261 | 281 | 295 | 194 | 266 |
| Fort Erie Coal Co., | 4 | 1 | 5 | 2 | 1 | 3 | 147,708 | 1,229 | 295 | 1,524 | 307 | 295 | 614 | 295 |
| Kingston Coal Co., | 3 | 1 | 4 | 2 | 1 | 3 | 164,411 | 1,851 | 284 | 1,135 | 284 | 284 | 425 | 284 |
| Mt. Lookout Coal Co., | 1 | 1 | 2 | 2 | 1 | 3 | 357,033 | 668 | 158 | 826 | 668 | 668 | 334 | 79 |
| East Boston Coal Co., | 2 | 1 | 3 | 2 | 1 | 3 | 105,257 | 435 | 161 | 596 | 217 | 161 | 217 | 161 |
| Haddock Mining Co., | 1 | 1 | 2 | 4 | 1 | 5 | 191,652 | 360 | 129 | 489 | 360 | 360 | 90 | 63 |
| Ramb Coal Co., | 1 | 1 | 2 | 2 | 2 | 4 | 167,540 | 356 | 126 | 482 | 356 | 356 | 118 | 63 |
| Campbell, Johns and Co., | 1 | 1 | 2 | 1 | 1 | 2 | 39,215 | 62 | 28 | 90 | 62 | 62 | 62 | 62 |
| Miscellaneous Companies, | 1 | 1 | 2 | 1 | 1 | 2 | 260 | 260 | 68 | 328 | 260 | 260 | 260 | 260 |
| Totals and averages, | 22 | 2 | 24 | 29 | 8 | 37 | 170,619 | 6,749 | 1,973 | 8,722 | 307 | 986 | 233 | 246 |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|---|----------|----------|----------|----------|----------|----------|----------|--------|-----------|----------|----------|----------|-----------|---------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | | | | | | 1 | 1 | | | | | 1 | 1 | 4.55 |
| Falls of slate, | | | | | | | | | | | | 2 | 2 | 9.09 |
| Falls of roof, | 1 | | | | 1 | 4 | | | 1 | | | | 10 | 45.45 |
| Mine cars, | | | | 1 | | | | | | 1 | | 1 | 3 | 13.64 |
| Blasts, premature and otherwise, | | | 1 | 2 | | 1 | | | | 1 | | | 5 | 22.72 |
| Rush of gob, | | | | | | | | | | 1 | | | 1 | 4.55 |
| Totals, | 1 | | 1 | 4 | 1 | 6 | 1 | | 1 | 3 | | 4 | 22 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Jumping from ash cart, | | | | | | | 1 | | | | | | 1 | 50.00 |
| Falling from coal wagon, | | | | | | | | | | | | 1 | 1 | 50.00 |
| Totals, | | | | | | | 1 | | | | | 1 | 2 | 100.00 |
| Grand totals inside and outside, | 1 | | 1 | 4 | 1 | 6 | 2 | | 1 | 3 | | 5 | 24 | |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|---|----------|----------|----------|-------|----------|------|----------|----------|-----------|----------|----------|----------|-----------|---------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | 1 | | | | | | | | 1 | | 1 | | 3 | 10.34 |
| Falls of slate, | 1 | | 1 | | | | | | | | | | 2 | 6.90 |
| Falls of roof, | | 1 | 3 | | 1 | | | | 1 | 1 | | | 5 | 24.13 |
| Mine cars, | 1 | | | | 3 | | 1 | 4 | | | | | 10 | 34.48 |
| Explosions of powder and dynamite, | | | | | | | | | | 1 | | 1 | 2 | 6.90 |
| Blasts, premature and otherwise, | | | | | | 1 | | | | | | | 1 | 3.45 |
| Falling timber, | | | | | | | 1 | | 1 | | | | 2 | 6.90 |
| Shaft carriage, | | | | | | | | | | | | 1 | 1 | 3.45 |
| Mules, | | | 1 | | | | | | | | | | 1 | 3.45 |
| Totals, | 3 | 1 | 5 | | 5 | | 2 | 4 | 3 | 1 | 1 | 2 | 29 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | 1 | | | | | | | | | 1 | 1 | | 3 | 37.50 |
| Machinery, | | | | | 1 | | | | 1 | | | | 2 | 25.00 |
| Falling in breaker, .. | | | | | | | | | | | 1 | | 1 | 12.50 |
| Mules, | 1 | | | | | | | 1 | | | | | 2 | 25.00 |
| Totals, | 2 | | | | 1 | | | 1 | 1 | 1 | 2 | | 8 | 100.0 |
| Grand totals inside and outside, | 5 | 1 | 5 | | 6 | | 2 | 5 | 6 | 2 | 3 | 2 | 37 | |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, | 1 | 1 | 1 | 2 | 1 | 3 | 1 | 1 | 1 | 2 | 1 | 1 | 11 |
| Miners' laborers, | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 7 |
| Drivers and runners, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| Doorboys and helpers, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Timbermen, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Totals, | 1 | 1 | 1 | 4 | 1 | 6 | 1 | 1 | 1 | 2 | 1 | 4 | 22 |
| Outside | | | | | | | | | | | | | |
| Breaker bosses, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Teamsters, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Totals, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| Grand totals inside and outside, | 1 | 1 | 1 | 4 | 1 | 6 | 2 | 1 | 1 | 3 | 1 | 5 | 24 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, | 2 | 1 | 1 | ..... | 2 | ..... | ..... | ..... | 2 | 1 | 1 | 1 | 11 |
| Miners' laborers, ..... | ..... | ..... | 3 | ..... | 2 | ..... | ..... | 2 | 1 | ..... | ..... | ..... | 6 |
| Drivers and runners, ..... | ..... | ..... | 1 | ..... | 2 | ..... | 2 | 2 | 1 | ..... | ..... | ..... | 8 |
| Doorboys and helpers, | 1 | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3 |
| Footmen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | 1 |
| Headmen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 |
| Totals, | 3 | 1 | 5 | ..... | 5 | ..... | 2 | 4 | 5 | 1 | 1 | 2 | 29 |
| Outside | | | | | | | | | | | | | |
| Loaders, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 |
| Jig runners, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Blacksmiths and carpenters, .. | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 2 |
| Engineers and firemen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 |
| Slatepickers (boys), ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 |
| Drivers, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 |
| Laborers, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, | 2 | ..... | ..... | ..... | 1 | ..... | ..... | 1 | 1 | 1 | 2 | ..... | 8 |
| Grand totals inside and outside, | 5 | 1 | 5 | ..... | 6 | ..... | 2 | 5 | 6 | 2 | 3 | 2 | 37 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| American, | | | | | | | | | | | 1 | 1 |
| English, | | | | | | | | | 1 | ..... | ..... | 1 |
| Irish, | | | | | | | 1 | ..... | ..... | ..... | ..... | 1 |
| Polish, | 1 | ..... | ..... | 1 | ..... | 3 | 1 | ..... | ..... | ..... | ..... | 3 |
| Italian, | | | | | | 1 | ..... | ..... | 1 | ..... | ..... | 2 |
| Slavonian, | | | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 |
| Lithuanian, | | | | 1 | 1 | 1 | ..... | ..... | ..... | ..... | ..... | 3 |
| Russian, | | | | 1 | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 2 |
| Greek, | | | | | | | | | | | 1 | 1 |
| Totals, | 1 | ..... | 1 | 4 | 1 | 6 | 2 | ..... | 1 | 3 | 5 | 24 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| American, | 1 | ..... | ..... | ..... | 1 | ..... | 2 | 1 | 1 | ..... | 1 | 7 |
| English, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 2 |
| Irish, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | ..... | ..... | 1 |
| German, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Polish, ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 1 | ..... | 1 | 1 | 6 |
| Hungarian, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Italian, | 1 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 | 3 |
| Slavonian, ..... | ..... | 1 | 4 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 5 |
| Lithuanian, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Austrian, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 |
| Totals, | 5 | 1 | 5 | ..... | 6 | ..... | 2 | 5 | 6 | 2 | 3 | 37 |

TABLE 1.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Operators and mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|------------------------|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|-------------|------------|----------------------------------|---|--|--|-----------------------------------|
| Jelich Valley Coal Co. | | | | | | | | | | | | | | | |
| Exeter Colliery: | | | | | | | | | | | | | | | |
| Red Ash, | Shaft | Gaseous | 2 fans, ... | 20 | 6.8 | 5.10 | 76 | 1.2 | | Steam | 4 | 102,707 | 51,485 | 103,200 | 153 |
| Pittston, | | | Fan, ... | 20 | 6.8 | 5.10 | 76 | 1.2 | Guibal, | | 5 | 97,007 | 70,780 | 104,463 | 102 |
| Knights, | | | Fan, ... | 20 | 5.11 | 5.11 | 60 | 1 | | | 4 | 72,874 | 163,912 | 82,137 | 194 |
| Matty Colliery: | | | Fan, ... | 22 | 6.11 | 6.7 | 60 | .8 | | | 5 | 426,254 | 103,113 | 138,520 | 161 |
| No. 2, | Shaft | Gaseous | 2 fans, ... | 25 | 8.11 | 6.10 | 72 | 3 | Guibal, | Steam | 10 | 158,760 | 129,724 | 188,460 | 434 |
| Four Foot, | Slope | Non-gas. | Fan, ... | 12 | 5.11 | 5.8 | 82 | 2.5 | Guibal, | Steam | 2 | 63,125 | 48,720 | 65,480 | 21 |
| Seneca Colliery: | | | | | | | | | | | | | | | |
| Twin, | Shaft | Gaseous | Fan, ... | 24 | 8 | 6 | 74 | 2.2 | | Steam | 5 | 150,000 | 90,000 | 105,000 | 320 |
| Coxey, | | | Fan, ... | 20 | 6 | 6 | 80 | 1.2 | Guibal, | | 4 | 42,500 | 75,000 | 104,000 | 126 |
| Pittston, | | | Fan, ... | 20 | 6 | 6 | 50 | .8 | | | 1 | 40,000 | 18,000 | 41,000 | 38 |
| William A. Colliery: | | | | | | | | | | | | | | | |
| William A., | Shaft | Non-gas. | Fan, ... | 18 | 5.3 | 5.9 | 75 | .7 | Guibal, | Steam | 4 | 35,000 | 59,000 | 70,000 | 116 |
| Barlow,* | Shaft | Non-gas. | Fan, ... | 20 | 5.3 | 5.9 | 80 | 1 | Guibal, | Steam | 2 | 30,000 | 51,900 | 76,000 | 85 |
| No. 10, | Tunnel | Non-gas. | Fan, ... | 20 | 2.3 | 2.3 | 200 | 1.2 | Guibal, | Steam | 4 | 58,650 | 51,900 | 76,000 | 46 |
| Westmoreland Colliery: | | | | | | | | | | | 2 | 51,650 | 50,550 | 56,000 | 232 |
| No. 1, | Tunnel | Gaseous | Fan, ... | 20 | 6 | 6 | 79 | 2 | Guibal, | Steam | 5 | 113,000 | 95,000 | 117,000 | 290 |
| Stevens Colliery: | | | | | | | | | | | | | | | |
| No. 1,* | Shaft | Gaseous | Fan, ... | 20 | 6 | 7 | 70 | .6 | Guibal, | Steam | 3 | 64,700 | 45,800 | 65,500 | 54 |
| No. 2, | | | Fan, ... | 20 | 5 | 6 | 65 | .6 | Guibal, | Steam | 3 | 72,500 | 55,900 | 73,400 | 114 |

* Table.

| | | | | | | | | | | | | | | | |
|--|----------------|-------------|----------------|----------|-------------|-------------|-----------|------------|-----------------|-----------------|----|---------|---------|---------|-----|
| Forty Fort Coal Co. Forty Fort Colliery: No. 1, | Shaft, | Gaseous, .. | 2 fans, .. { | 20 20 | 7 7 | 6.8 6 | 96 90 | 2.2 1.8 | { Guibal, | Steam, | 10 | 165,893 | 142,060 | 193,826 | 611 |
| Harry B. Colliery: No. 1, | Shaft, | Gaseous, .. | Fan, | 25 | 8 | 6.10 | 75 | 2 | Guibal, | Steam, | 12 | 273,282 | 258,045 | 273,927 | 588 |
| Baby, | Tunnel, .. | Gaseous, .. | Fan, | 13.4 | 3.8 | 3.2 | 85 | 1 | Guibal, | Steam, | 2 | 20,456 | 17,500 | 21,150 | 30 |
| Kingston Coal Co. Kingston No. 4 Colliery: No. 1, | Shaft, | Gaseous, .. | 2 fans, .. { | 25 | 8 | 8 | 74 | 2.5 | { Guibal, | Steam, | 9 | 251,300 | 232,700 | 252,800 | 456 |
| No. 4, | Shaft, | Gaseous, .. | 2 fans, .. { | 25 | 8 | 8 | 80 | 2.5 | { Guibal, | Steam, | 6 | 168,109 | 112,450 | 198,500 | 325 |
| Mt. Lookout Coal Co. Mt. Lookout Colliery: No. 1, | Shaft, | Gaseous, .. | 2 fans, .. { | 20 20 | 7 6.3 | 6.10 5.4 | 80 84 | 1.6 1.7 | { Guibal, | Steam, | 15 | 174,763 | 153,187 | 201,617 | 658 |
| East Boston Coal Co. East Boston Colliery: No. 1, | Shaft, | Gaseous, .. | Fan, | 25 | 7 | 7 | 62 | 1.5 | Guibal, | Steam, | 11 | 173,000 | 142,000 | 175,000 | 563 |
| Haddock Mining Co. Black Diamond Colliery: No. 1 Shaft, | Shaft, | Gaseous, .. | Fan, | 20 | 6 | 6.6 | 90 | 1.9 | Vulcan, | Steam, | 8 | 125,000 | 115,000 | 129,000 | 50 |
| Ramb Coal Co. Louise Colliery: Mt. Thomas, | Tunnel, .. | Non-gas, .. | { Fan, | 13 | 5 | 5 | 120 | .8 | Guibal, | Steam, | 4 | 39,600 | 29,600 | 22,000 | 116 |
| Nine Foot, | Tunnel, .. | | Natural, | | | | | | | | | | | 14,100 | 16 |
| Nonlike, | Tunnel, .. | | Natural, | | | | | | | | 4 | 27,000 | 27,000 | 29,000 | 95 |
| Ross, Ash, | Slope, .. | | Natural, | | | | | | | | 2 | 13,700 | 13,100 | 14,200 | 29 |
| Sand, | Slope, .. | | Natural, | | | | | | | | 2 | 13,900 | 13,200 | 14,200 | 47 |
| | | | | | | | | | | | 2 | 26,900 | 26,100 | 28,200 | 29 |
| Delaware, Lackawanna and Western Railroad Co. Pettbone Colliery: No. 1, | { Shaft, | Gaseous, .. | 2 fans, .. { | 22 59 | 6.2 10.1 | 6 9.1 | 120 52 | 1.7 2.3 | { Dickson, .. | Steam, | 10 | 173,300 | 150,100 | 202,600 | 261 |
| No. 2, | | | | | | | | | | | | | | | |
| Campbell, Johns and Co. Troy Colliery: No. 1, | Tunnel, .. | Non-gas, .. | Fan, | 7.6 | 2.6 | 2 | 250 | .5 | Buffalo, | Electricity, .. | 2 | 20,000 | 20,000 | 22,000 | 62 |

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|--|--|--|---|--|--|---|
| Lehigh Valley Coal Co. Exeter, Nash, Sage, William A., Lehigh Valley Coal Co., Westmoreland, Stevens, | Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, | Thomas Thomas, ... Thomas Thomas, ... Thomas Thomas, ... Thomas Thomas, ... Thomas Thomas, ... Thomas Thomas, ... Thomas Thomas, ... | Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, Wilkes-Barre, | W. D. Owens, W. D. Owens, W. D. Owens, W. D. Owens, W. D. Owens, W. D. Owens, W. D. Owens, | Pittston, Pittston, Pittston, Pittston, Pittston, Pittston, Pittston, | Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley |
| * Forty Fort Coal Co. Forty Fort, Harry E., Kingston Coal Co. Kingston No. 4, Mt. Lookout Coal Co. Mt. Lookout, East Boston Coal Co. East Boston, East Boston Washery, Haddock Mining Co. Black Diamond, | Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, | Frank H. Hemel- right, Frank H. Hemel- right, Frank H. Hemel- right, Frank H. Hemel- right, Frank H. Hemel- right, Frank H. Hemel- right, Frank H. Hemel- right, Frank H. Hemel- right, | Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, Scranton, | James J. McCarty, .. James J. McCarty, .. James J. McCarty, .. James J. McCarty, .. James J. McCarty, .. James J. McCarty, .. James J. McCarty, .. James J. McCarty, .. James J. McCarty, .. James J. McCarty, .. James J. McCarty, .. | Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, | Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley |
| Louise, Delaware, Lackawanna and Western Railroad Co. Pettebone, Campbell, Johns and Co. Troy, | Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, | Gwilym Edwards, ... Gwilym Edwards, ... Gwilym Edwards, ... Gwilym Edwards, ... Gwilym Edwards, ... | Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, | Gwilym Edwards, ... Gwilym Edwards, ... Gwilym Edwards, ... Gwilym Edwards, ... Gwilym Edwards, ... | Luzerne, Luzerne, Luzerne, Luzerne, Luzerne, | Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley Lehigh Valley |

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|-----------------------------------|----------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Leligh Valley Coal Co. | | | | | | | | | | | | | |
| Exeter, | Luzerne, | 322,613 | 58,322 | 23,124 | 404,059 | 234 | 780 | 5 | 2 | 351,550 | 202,875 | ..... | 143 |
| Malby, | Luzerne, | 259,420 | 38,469 | 8,576 | 306,465 | 271 | 610 | 3 | 4 | 234,155 | 141,093 | ..... | 104 |
| Seneca, | Luzerne, | 542,355 | 42,032 | 8,647 | 593,034 | 224 | 618 | ..... | 2 | 395,150 | 11,000 | ..... | 90 |
| William A., | Lackawanna, } | 240,685 | 30,017 | 8,647 | 275,359 | 250 | 679 | ..... | 5 | 265,400 | 21,039 | ..... | 94 |
| Westmoreland, | Luzerne, | 179,816 | 18,878 | 6,354 | 205,048 | 216 | 375 | ..... | ..... | 92,150 | 131,825 | ..... | 36 |
| Stevens, | Luzerne, | 101,410 | 10,296 | 700 | 112,346 | * | 149 | 1 | 2 | 23,925 | 45,150 | ..... | 30 |
| Totals, ..... | ..... | 1,346,889 | 198,014 | 55,178 | 1,600,081 | ..... | 3,261 | 9 | 15 | 1,207,200 | 557,987 | ..... | 497 |
| Forty Fort Coal Co. | | | | | | | | | | | | | |
| Forty Fort, | Luzerne, | 274,428 | 25,064 | 4,056 | 303,548 | 251 | 758 | 1 | 1 | 214,990 | 125,925 | ..... | 87 |
| Harry E., | Luzerne, | 257,123 | 26,117 | 4,044 | 287,284 | 250 | 766 | 4 | 2 | 238,375 | 89,300 | ..... | 85 |
| Totals, ..... | ..... | 531,551 | 51,181 | 8,100 | 590,832 | ..... | 1,524 | 5 | 3 | 453,375 | 214,925 | ..... | 172 |
| Kingston Coal Co. | | | | | | | | | | | | | |
| Kingston No. 4, | Luzerne, | 437,335 | 50,000 | 5,900 | 493,235 | 248 | 1,135 | 3 | 2 | 519,250 | 3,100 | 22,325 | 101 |
| Mt. Lookout Coal Co. | | | | | | | | | | | | | |
| Mt. Lookout, | Luzerne, | 308,890 | 43,846 | 4,297 | 357,033 | 274 | 826 | 1 | 4 | 243,250 | 180,400 | ..... | 31 |
| East Boston Coal Co. | | | | | | | | | | | | | |
| East Boston, | Luzerne, | 149,729 | 32,284 | 7,328 | 189,439 | 164 | 563 | 3 | 3 | 146,250 | 8,600 | 20,000 | 91 |
| East Boston Washery, | Luzerne, | 13,169 | 7,885 | 222 | 21,076 | 356 | 33 | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, ..... | ..... | 162,898 | 40,069 | 7,548 | 210,515 | ..... | 596 | 3 | 3 | 146,250 | 8,600 | 20,000 | 91 |

*Coal prepared at William A.

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | Locomotives | | | | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors |
|--|---------------|-------------------|-------------|---------|-------------|-------------------|----------|-------|-------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Air |  |  |  |  |  |  |  | Electric |
| Lohigh Valley Coal Co., | Lackawanna, } | ..... | ..... | ..... | ..... | ..... | 6 | 6 | 17 | 124 | 11,359 | 23 | 26,258 | 15,344 | 9 | 2 |
| Forty Fort Coal Co., | | | | | | | | 2 | | 1 | 41 | 3,595 | 8 | 6,600 | 4,290 | |
| Kingston Coal Co., | Luzerne, } | 14 | 3,900 | ..... | 3,900 | 3,600 | ..... | ..... | ..... | 30 | 4,325 | ..... | 6,000 | 5,100 | 4 | 1 |
| Mt. Lookout Coal Co., | | 10 | 2,600 | ..... | 2,600 | 2,600 | 1 | ..... | 9 | 29 | 2,100 | ..... | 6,750 | 2,900 | 3 | 3 |
| East Boston Coal Co., | Luzerne, } | 11 | 2,302 | ..... | 2,302 | 2,302 | ..... | ..... | ..... | 28 | 1,388 | ..... | 4,500 | 2,000 | 3 | 3 |
| Haddock Mining Co., | | 15 | 2,600 | ..... | 2,600 | 2,600 | 1 | ..... | 1 | 46 | 3,300 | ..... | 2,800 | 1,600 | 2 | 3 |
| Rauh Coal Co., | | 3 | 900 | | 900 | 900 | 2 | | | | 14 | 840 | | 1,500 | 1,000 | |
| Delaware, Lackawanna and Western Railroad Co., | Lackawanna, } | 10 | 1,350 | ..... | 1,350 | 1,350 | 1 | ..... | ..... | 29 | 2,861 | ..... | 160 | 160 | 1 | ..... |
| Campbell, Johns and Co., | | 2 | 200 | ..... | 200 | 200 | ..... | ..... | ..... | 6 | 155 | ..... | 100 | 100 | 1 | ..... |
| Totals, ..... | ..... | 112 | 28,610 | ..... | 28,610 | 28,610 | ..... | 14 | 6 | 347 | 30,438 | 53 | 57,298 | 32,404 | 22 | 12 |

TABLE 3.—Number of each class of employes inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | Outside | | | | | | | | Grand total | | |
|--|---------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|--------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|-------------|--------------------|---------------|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employes | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | Bookkeepers and clerks | | All other employes | Total outside |
| Lehigh Valley Coal Co., | Lackawanna, } | 11 | 62 | .... | 1,143 | 467 | 327 | 31 | 44 | 443 | .... | 2,528 | .... | 6 | 74 | 112 | 68 | 9 | 18 | 446 | 733 | 3,261 |
| Forty Fort Coal Co., | Luzerne, | 2 | 7 | 11 | 459 | 384 | 152 | 35 | 19 | 73 | 87 | 1,229 | 2 | 2 | 31 | 29 | 35 | 54 | 6 | 138 | 295 | 1,524 |
| Kingston Coal Co., ..... | ..... | 1 | 8 | 4 | 368 | 248 | 124 | 17 | 13 | 17 | 104 | 851 | 1 | 1 | 38 | 30 | .... | 47 | 5 | 162 | 284 | 1,135 |
| Mt. Lookout Coal Co., ..... | ..... | 1 | .... | .... | 209 | 286 | 25 | 13 | 11 | 49 | 69 | 658 | 1 | 1 | 14 | 24 | .... | 31 | 3 | 78 | 158 | 856 |
| East Boston Coal Co., | Luzerne, | 1 | 3 | 5 | 139 | 129 | 82 | 6 | 8 | 76 | 4 | 435 | 1 | 3 | 20 | 21 | 22 | 4 | 5 | 75 | 161 | 596 |
| Haddock Mining Co., .... | ..... | 1 | 3 | 3 | 112 | 65 | 52 | 8 | 6 | 70 | 40 | 369 | 1 | 1 | 9 | 21 | 27 | 1 | 3 | 57 | 120 | 489 |
| Rain Coal Co., ..... | ..... | 4 | 3 | 1 | 175 | 73 | 52 | 7 | 5 | 7 | 29 | 356 | 1 | 1 | 10 | 13 | 25 | 9 | 4 | 62 | 126 | 482 |
| Dawson, Lackawanna and Western Railroad Co., .... | ..... | 1 | .... | 3 | 88 | 59 | 25 | 8 | 1 | 3 | 72 | 290 | .... | 1 | 4 | 12 | .... | 14 | 3 | 34 | 68 | 328 |
| Campbell, Johns and Co., .. | ..... | 1 | .... | .... | 20 | 29 | 12 | 1 | 2 | 6 | .... | 72 | 1 | 1 | 1 | 3 | 10 | .... | 1 | 9 | 28 | 30 |
| Totals, ..... | ..... | 25 | 86 | 37 | 2,644 | 1,722 | 851 | 126 | 109 | 744 | 405 | 6,749 | 8 | 18 | 293 | 265 | 201 | 169 | 48 | 1,063 | 1,973 | 8,722 |

TABLE 3.—Part 2

| Names of Operators | County | Average Number of Days Worked Monthly | | | | | | | | | | | | |
|--|--|---------------------------------------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|-------|
| | | January | February | March | April | May | June | July | August | September | October | November | December | Total |
| Lehigh Valley Coal Co., | { Lackawanna, .. } } Luzerne, | 16 | 15 | 14 | 23 | 20 | 18 | 18 | 18 | 18 | 22 | 21 | 22 | 225 |
| Forty Fort Coal Co., | | 22 | 16 | 15 | 22 | 20 | 17 | 15 | 21 | 21 | 21 | 20 | 20 | 230 |
| Kingston Coal Co., | { Luzerne, | 19 | 15 | 18 | 22 | 22 | 22 | 17 | 20 | 25 | 24 | 23 | 24 | 248 |
| Mt. Lookout Coal Co., | | 24 | 19 | 19 | 23 | 24 | 25 | 21 | 24 | 24 | 24 | 23 | 24 | 274 |
| East Boston Coal Co., | | 22 | 18 | 20 | 20 | 21 | 21 | 20 | 21 | 20 | 21 | 20 | 21 | 245 |
| Haddock Mining Co., | | 21 | 22 | 22 | 21 | 20 | 21 | 21 | 19 | 19 | 20 | 19 | 21 | 246 |
| Rauh Coal Co., | | 23 | 23 | 26 | 22 | 23 | 25 | 25 | 25 | 25 | 23 | 23 | 24 | 287 |
| Delaware, Lackawanna and Western Railroad Co., | | 13 | 16 | 14 | 22 | 21 | 22 | 13 | 13 | 16 | 21 | 21 | 20 | 212 |
| Campbell, Johns and Co., ..... |  | ..... | ..... | 17 | 22 | 24 | 25 | 24 | 25 | 23 | 25 | 24 | 24 | 233 |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|--|--------------------------------|--------------------------------|----------|-------------------|------------------|-------------------|--------------------|---------------|---|
| Jan. 5 | John Zinavich, | Polish,..... | Laborer, | 30 | S. | .... | .... | Forty Fort, | | Instantly killed by fall of roof at face of cross-heading. |
| March 26 | Martin Twanski, | Slavonian, .. | Miner, | 25 | M. | 1 | 1 | Malby, | | Fatally injured at face of chamber. He was climbing a hole illegally when the roof collapsed. |
| April 2 | { George Walonis, John Walonis, | Russian, Russian, | Miner, Laborer, | 54 21 | M. S. | 1 | { | Exeter, | | Fatally injured by blast at face of chamber. The miner was preparing a "combination" charge, consisting of black powder, dynamite and detonator. As the tamping was being forced back in the hole the needle was forced back with it, and the point of needle pierced detonator, causing it to explode. |
| 7 | Joseph Miscavage, | Lithuanian, .. | Door-tender, ... | 60 | M. | 1 | .... | Kingston No. 4, .. | | Fatally injured by being struck by car on gangway while attempting to open door. |
| May 29 | Julius Nastycoski, ... | Polish,..... | Miner, | 20 | M. | 1 | 2 | Kingston No. 4, .. | | Killed by fall of roof at face of chamber. |
| May 27 | George Batevich, | Lithuanian, .. | Laborer, | 65 | M. | 1 | .... | East Boston, .. | Lazerve, | Fatally injured by fall of roof at face of counter-gangway. |
| June 2 | Peter Besowkie, | Polish,..... | Miner, | 37 | M. | 1 | 4 | Malby, | | Fatally injured by fall of roof at face of chamber. |
| 11 | John Stanchick, | Russian, | Miner, | 23 | S. | .... | .... | East Boston, .. | | Instantly killed by fall of middle slate at face of chamber. |
| 19 | Thomas Mulla, | Italian,..... | Miner, | 33 | M. | 1 | 4 | Harry E., | | Fatally injured by blast at face of chamber. |
| | Andrew Krokoskey, .. | Lithuanian, .. | Laborer, | 52 | M. | 1 | .... | Stevens, | | Fatally injured by fall of roof at face of pillar. |
| 21 | Blagu Barran, | Polish,..... | Laborer, | 19 | S. | .... | .... | Troy, | | Instantly killed by fall of roof at face of chamber. |
| 30 | Joseph Ofciarczik, .. | Polish,..... | Laborer, | 42 | M. | 1 | 6 | Exeter, | | Instantly killed by fall of roof at face of gangway. |
| July 14 | William Ambrosi, | Polish,..... | Miner, | 31 | M. | 1 | 2 | Exeter, | | Fatally injured by fall of middle slate at face of pillar. |
| 15 | Michael Casey, | Irish, | Breaker boss,... | 46 | M. | 1 | 6 | Harry E., | | Fatally injured when he jumped from ash cart. Outside. |
| Sept. 15 | Samuel Sepena, | Italian, | Miner, | 35 | S. | .... | .... | Malby, | | Fatally injured by fall of roof at face of chamber. |

| | | | | | | | | | | |
|------|----|-----------------------|----------------|-----------------|----|----|------|------|-----------------|---|
| Oct. | 4 | John Shroba, | Slavonian, .. | Miner, | 39 | M. | 1 | 4 | Louise, | Fatally injured by rock that slid from gob at face of gangway. |
| | 7 | Ismarto Irsimus, ... | Italian, | Miner, | 37 | M. | 1 | 5 | Harry E., | Instantly killed by blast at face of cross-over. |
| | 13 | Luther Hartman, | English, .. | Runner, | 22 | S. | .... | .... | Harry E., | Instantly killed by falling under cars on gangway. |
| Dec. | 2 | Frank Loksic, | Slavonian, .. | Miner, | 54 | M. | 1 | 3 | Black Diamond, | Fatally injured by fall of top coal at face of chamber. |
| | 9 | Con. Spatz, | Greek, | Timberman, ... | 33 | M. | 1 | 4 | Kingston No. 4, | Instantly killed by fall of roof on slope while making repairs. |
| | 13 | Frank Martin, | American, .. | Runner, | 23 | M. | 1 | 1 | Exeter, | Fatally injured by being caught between rib and car on main road. Car left the track. |
| | 15 | Joseph Mickloskey, .. | Russian, ... | Teamster, | 49 | M. | 1 | .... | East Boston, .. | Fatally injured by falling under coal wagon at breaker. Outside. |
| | 29 | David Babachick, | Polish, | Laborer, | 45 | S. | .... | .... | Mt. Lookout, .. | Instantly killed by fall of roof at face of chamber. |

Luzerne,

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|-------------------------|----------------|-------------------|-----|-------------------|-----------------------|------------------|---|
| Jan. 12 | Thomas O'Malley, ... | American, .. | Blacksmith, | 64 | S. | William A., | Lackawanna, | Small bone in leg fractured while shoeing mule. Outside. |
| 13 | Charles Hungary, ... | Hungarian, .. | Laborer, | 40 | M. | East Boston, | | Small bone in leg fractured by cars on trestle. Outside. |
| 27 | John Lloyd, | English, ... | Miner, | 54 | M. | Black Diamond, | | Shin bone fractured by fall of coal at face of chamber. |
| 29 | Martin Casperunis, .. | Lithuanian, .. | Miner, | 32 | S. | Harry E., | | Leg broken and head lacerated by fall of slate at face of chamber. |
| Feb. 5 | Adolf Pinesky, | Italian, | Doorboy, | 16 | S. | Mt Lookout, | | Elbow dislocated. Caught between cars and headblock on gangway. |
| March 6 | Joseph Mayesick, | Slavonian, .. | Miner, | 29 | M. | Kingston No. 4, | | Back injured by fall of roof at face of chamber. |
| 19 | George Sweets, | Slavonian, .. | Laborer, | 20 | S. | Maltby, | | Leg broken by fall of roof in cross-heading at face of chamber. |
| 23 | George Klogo, | Slavonian, .. | Runner, | 23 | S. | Maltby, | | Nose broken by being kicked by mule on chamber road. |
| 25 | Steve Meshon, | Slavonian, .. | Laborer, | 33 | M. | Louise, | | Thigh fractured by fall of roof at face of chamber. |
| 26 | Adam Stelma, | Slavonian, .. | Miner, | 29 | M. | Harry E., | | Compound fracture of leg by fall of roof at face of chamber. |
| May 10 | Jacob Luther, | Polish, | Laborer, | 20 | S. | Stevens, | | Foot crushed by fall of middle slate at face of pillar. |
| 17 | Custle Nowak, | American, .. | Jig runner, | 19 | S. | Mt. Lookout, | | Arm broken. Caught in jig scraper line. |
| 18 | Frank Tuck, | Italian, | Runner, | 23 | S. | Louise, | | Back broken while coupling cars at foot of slope. |
| 21 | Mike Patara, | Polish, | Miner, | 36 | M. | Maltby, | | Hips and legs injured by fall of roof at face of chamber. |
| 26 | Joseph Orzechowsky, ... | Lithuanian, .. | Miner, | 30 | M. | Exeter, | | Ankle bone broken by coal from blast. He shortened squib. |
| July 18 | Mike Yergolinis, | Lithuanian, .. | Doortender, | 17 | S. | Seneca, | | Body squeezed by car while attempting to place it on rails. |
| | William Cleary, | Irish, | Runner, | 35 | M. | Louise, | | Leg broken by falling timber at foot of slope. Timber was dislodged by runaway car. |
| | Robert Williams, | American, .. | Driver, | 19 | S. | East Boston, | | |

| | | | | | | | | | |
|-------|----|------------------------|-------------------|--------------------|----|----|-----------------------|-----------------|---|
| July | 21 | Anthony Glogoskie, .. | American, .. | Driver, | 19 | S. | Exeter, | Luzerne, | Leg broken when car struck head block on gangway. |
| Aug. | 9 | Joseph Gowich, | Lithuanian, | Laborer, | 50 | M. | William A., | Lackawanna, ... | Arm broken and knee and shoulder dislocated by cars on slope. |
| | 10 | Matt Trilop, | Lithuanian, | Driver, | 24 | S. | Black Diamond, | Luzerne, | Shoulder dislocated and body bruised by cars on gangway. |
| | 11 | Joseph Melesky, | Polish, | Driver, | 19 | S. | William A., | Lackawanna, ... | Wrist dislocated by cars on gangway. |
| | 26 | Joseph Johns, Jr., .. | American, .. | Driver, | 18 | S. | Louise, | Lackawanna, ... | Arm broken by falling from mule. Out-side. |
| Sept. | 27 | Frank Lanawich, | Austrian, .. | Laborer, | 27 | M. | East Boston, | Lackawanna, ... | Collar bone broken by cars on gangway. |
| | 1 | Charles Derhamer, .. | American, .. | Carpenter, | 49 | M. | Forty Fort, | Lackawanna, ... | Collar severely cut by cross-cut saw in flume. |
| | 9 | Andrew Borask, | Slavonian, .. | Headman, | 19 | S. | Kingston No. 4, | Luzerne, | Head, back and hips injured by fall of roof on slope. |
| | 14 | George Braska, | Slavonian, .. | Driver, | 25 | M. | Maltby, | Luzerne, | Arm broken by falling off mine car on gangway. |
| | 22 | Anthony Bagdon, | Lithuanian, .. | Laborer, | 30 | S. | Black Diamond, | Lackawanna, ... | Body severely injured and arm broken by fall of coal at face of chamber. |
| | 29 | Rudolph Whrel, | German, | Miner, | 40 | M. | Black Diamond, | Lackawanna, ... | Ankle bone broken by falling timber at face of chamber. |
| Oct. | 30 | John Mitchell, | Lithuanian, .. | Miner, | 54 | M. | William A., | Lackawanna, ... | Hands, face and legs burned while making a charge of black powder. |
| | 13 | Robert Lees, | English, ... | Engineer, | 33 | M. | William A., | Lackawanna, ... | Leg broken while caught between car and locomotive. |
| | 26 | Stanley Kosloskie, ... | Polish, | Miner, | 39 | M. | Troy, | Lackawanna, ... | Two ribs broken and head injured by fall of roof at face of chamber. |
| Nov. | 13 | Joseph Savage, | Polish, | Slatepicker, | 16 | S. | Mt. Lookout, | Luzerne, | Thigh broken. He fell while playing in breaker. Outside. |
| | 15 | Frank Deminger, | American, ... | Loader, | 28 | S. | Louise, | Luzerne, | Wrist broken. Cars ran away under breaker. Outside. |
| | 30 | Gemio Geovaneni, | Italian, | Miner, | 40 | M. | Stevens, | Luzerne, | Leg severely cut by fall of coal at face of pillar. |
| Dec. | 13 | Zigmund Tomcavitch, .. | Polish, | Footman, | 25 | S. | Mt. Lookout, | Luzerne, | Leg broken when shaft carriage struck bottom of shaft. |
| | | Stanley Slankibus, .. | Lithuanian, .. | Miner, | 34 | S. | Seneca, | Luzerne, | Hand and hip severely injured by powder while preparing charge of black powder with naked lamp on his head. |

CONDITION OF COLLIERIES

LEHIGH VALLEY COAL COMPANY

Exeter, Maltby, Seneca, Westmoreland and Stevens Collieries.—Ventilation, drainage and condition as to safety, good.

William A Colliery.—Ventilation and drainage, good. Condition as to safety, fair.

FORTY FORT COAL COMPANY

Forty Fort and Harry E. Collieries.—Ventilation, drainage and condition as to safety, good.

KINGSTON COAL COMPANY

Kingston No. 4 Colliery.—Ventilation, drainage and condition as to safety, good.

MT. LOOKOUT COAL COMPANY

Mt. Lookout Colliery.—Ventilation, drainage and condition as to safety, good.

EAST BOSTON COAL COMPANY

East Boston Colliery.—Ventilation, drainage and condition as to safety, good.

HADDOCK MINING COMPANY

Black Diamond Colliery.—Ventilation, drainage and condition as to safety, fair.

RAUB COAL COMPANY

Louise Colliery.—Ventilation, drainage and condition as to safety, fair.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone Colliery.—Ventilation, drainage and condition as to safety, good.

CAMPBELL, JOHNS AND COMPANY

Troy Colliery.—Ventilation, drainage and condition as to safety, good.

IMPROVEMENTS

LEHIGH VALLEY COAL COMPANY

Exeter Colliery.—Tunnel was driven through the anticlinal in the Marcy vein. Rock plane was driven from Red Ash to Fifth vein. Four 4-inch drainage holes were drilled from Marcy vein to Red Ash vein, to be used for drainage purposes. A spray system for

fire protection was installed in the breaker and washery. Repairs to boiler plant were completed. Red Ash shaft engine house was rebuilt with brick and made fireproof. Tile hose house and scale office were erected. Colliery yard was regraded.

Maltby Colliery.—The pumping plant at this colliery has been abandoned. The water in the Marcy vein is carried in pipes to the lower elevation and forced up through an 8-inch bore hole to the Six Foot vein. It then flows to bore holes which were put through the barrier pillar to the workings of the Henry colliery, where it is pumped to the surface. A slope is being sunk in the abandoned Six Foot workings, Fuller shaft. Until recently these workings were under water. A Morgan-Gardner undercutting machine was installed in the Top Red Ash split. A spray system was installed in the breaker for fire protection. A concrete reservoir having a capacity of 50,000 gallons, together with a pumping plant, was installed near the breaker, to furnish water for the fire system. A steam shovel is at work picking up the culm bank at the Fuller colliery. A plane was constructed at the breaker and a locomotive track constructed for the purpose of transporting the culm to the breaker.

Seneca Colliery.—Two tunnels were driven from the bottom split of the Marcy vein to the top split. Two 7½-ton Jeffery electric motors were installed in the Clarke vein. One 6-inch bore hole was drilled through the barrier pillar to the workings of the Stevens Colliery in the Marcy vein. A Jeanesville pump was installed and a fireproof pumphouse erected at the Twin shaft to supply the breaker with water. A Pennsylvania crusher was installed at the breaker to crush the refuse for silting in the Marcy vein. Safety automatic gates were installed at Twin shaft. Colliery yard was regraded.

William A. Colliery.—Electric haulage was installed from No. 10 tunnel to Evan's Farm section and the system was rebuilt to William A. shaft. This will allow all coal to be transported underground instead of dumping part of the output into railroad cars for shipment to the breaker for preparation. A new concrete engine house was constructed inside and a bore hole put down for exhaust steam to handle the coal on the Lawrence plane. A tile washhouse and foreman's office was built at No. 10 tunnel. Steel lockers for 32 men have been provided. A substation for electric power has been established at Babylon shaft. A spray system for fire protection has been installed at the breaker. Automatic safety gates were installed at William A. shaft.

Westmoreland Colliery.—A new second opening was driven from the Pittston vein to the surface. The plant for generating electricity and a new substation built. Power is now purchased from Luzerne County Gas and Electric Company. The feed wire system was also rebuilt. A new tile shop building is under construction. A spray system for fire protection was also installed.

Stevens Colliery.—Two 6-inch bore holes were drilled through the barrier pillar in the Pittston vein and two in the Red Ash vein. These bore holes were 250 feet long, and will be used for the purpose of draining Stevens colliery and abandoning the pumping plant. Steam blowers were dispensed with at the boilers and a blast fan installed. Old boiler plant was dismantled. Work was commenced to reopen the Pittston and Checker veins for pillars. Refuse banks are being silted into the mines through a new 10-inch bore hole. A rock crusher is used to crush the material.

KINGSTON COAL COMPANY

Kingston No. 4 Colliery.—No. 1 shaft: One 8-inch hole was drilled from Bennett vein to Ross vein for drainage. A new concrete air bridge was built in the Orchard vein.

No. 4 Shaft: New fireboss station was constructed at foot of shaft. Shaft was driven from Checker vein to Bennett for drainage and flushing. New 8-inch bore hole was drilled from Ross to Red Ash vein for pumping purposes. A concrete re-enforced partition was completed between the downcast and upcast airways in hoisting shaft. A concrete re-enforced building was erected for encasing a new 28-foot Vulcan fan with Corliss engine. This is a duplicate of the building erected in 1914. A new manway has been completed from the Ross tunnel to the foot of the shaft in the Red Ash vein.

EAST BOSTON COAL COMPANY

East Boston Colliery.—Installed one 21 by 36 inch air compressor, complete. Built fireproof compressor engine house; also fireproof hospital on the surface. Two electric generators were installed for lighting purposes. Tunnels were driven from Bennett vein to Cooper vein and from Eleven Foot vein to Bennett vein. An air shaft was driven from Cooper vein to Bennett vein.

HADDOCK MINING COMPANY

Black Diamond Colliery.—Rock plane was driven from Lance vein to Orchard vein, 208 feet, on 21 degree pitch, equipped with one pair of Flori engines. New fireproof engine room was built at head of Eleven Foot slope for housing 12 by 24 inch Vulcan hoisting engines.

RAUB COAL COMPANY

Louise Colliery.—Installed 3 electric hoists and 4 electric centrifugal pumps.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone Colliery.—Breaker was reconstructed and is again in operation. The work of developing thin seams is still underway.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in Pittston, May 18 and 19. The Board of Examiners was composed of S. J. Jennings, Mine Inspector, Pittston; James J. McCarty, Superintendent, Luzerne; Thomas Grogan, Miner, Luzerne; John Evers, Miner, Luzerne.

The following applicants passed a satisfactory examination and were granted certificates:

MINE FOREMEN

Karl F. Arbogast, Atherton Bowen, Pittston; Edward Handley, Edwardsville; William Mills, Benjamin McEnaney, Exeter; John J. McDonnell, Malachi Glennon, Kingston; Willard Pryn, Hugh G. Henderson, Patrick J. Lavin, Luzerne; John Psolka, Swoyersville; Frederic W. Emerson, Wyoming.

ASSISTANT MINE FOREMEN

Edward Balcomb, Forty Fort; David T. Jenkins, James Maloney, William Joseph, Edwardsville; John Hawk, Swoyersville; Charles J. Williams, Albert Reid, Pittston; William J. Rodda, Luzerne.



NINTH DISTRICT

LUZIERNE COUNTY

Wilkes-Barre, Pa., February 20, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Ninth Anthracite District for the year ending December 31, 1915.

Respectfully submitted ,

D. T. DAVIS,
Inspector.

SUMMARY OF STATISTICS

| | |
|--|-----------|
| Number of collieries, | 15 |
| Number of mines, | 46 |
| Number of mines in operation, | 46 |
| Number of tons of coal shipped to market, | 4,463,404 |
| Number of tons used at mines for steam and heat, | 434,575 |
| Number of tons sold to local trade and used by employes, | 140,168 |
| Number of tons produced, | 5,038,147 |
| Number of tons produced by compressed air machines, . | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 7,968 |
| Number of persons employed outside, | 2,171 |
| Number of fatal accidents inside of mines, | 39 |
| Number of fatal accidents outside, | 2 |
| Number of non-fatal accidents inside of mines, | 35 |
| Number of non-fatal accidents outside, | 5 |
| Number of tons of coal produced per fatal accident in- side, | 129,183 |
| Number of tons produced per fatal accident outside, .. | 2,519,073 |
| Number of tons produced per fatal accident inside and outside, | 122,882 |
| Number of persons employed per fatal accident inside,.. | 204 |
| Number of persons employed per fatal accident outside, | 1,086 |
| Number of persons employed per fatal accident inside and outside, | 247 |
| Number of persons employed per non-fatal accident in- side, | 228 |
| Number of persons employed per non-fatal accident out- side, | 434 |
| Number of persons employed per non-fatal accident in- side and outside, | 253 |
| Number of wives made widows, | 28 |
| Number of children made orphans, | 68 |
| Number of steam locomotives used inside of mines, | 1 |
| Number of steam locomotives used outside, | 16 |
| Number of compressed air locomotives used inside, | 7 |
| Number of compressed air locomotives used outside, .. | ..... |
| Number of electric motors used inside, | 41 |
| Number of electric motors used outside, | 5 |
| Number of gasoline locomotives used inside, ..... | ..... |
| Number of fans in use, | 43 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 42 |
| Number of non-gaseous mines in operation, | 4 |
| Number of new mines opened, ..... | ..... |
| Number of old mines abandoned, ..... | ..... |

TABLE A
PRODUCTION OF COAL

| Names of Operators | Tons |
|---|-------------------------|
| Lehigh and Wilkes-Barre Coal Company, | 1,553,732 |
| Delaware, Lackawanna and Western Railroad Com- pany, | 1,372,369 |
| Delaware and Hudson Company, | 1,126,193 |
| Kingston Coal Company, | 752,312 |
| George F. Lee Coal Company, | 125,513 |
| West Nanticoke Coal Company, | 93,717 |
| Plymouth Red Ash Coal Company, | 14,311 |
| Total, | <u><u>5,038,147</u></u> |

Production by Counties

| | |
|----------------|-------------------------|
| Luzerne, | <u><u>5,038,147</u></u> |
|----------------|-------------------------|

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Percentages | |
|---|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|-------------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | Totals |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | 1 | 1 | 1 | 2 | ..... | 7 | 17.95 |
| Falls of slate, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2.56 |
| Falls of roof, | 1 | 1 | 3 | 1 | 1 | 2 | ..... | 1 | 1 | ..... | ..... | 2 | 13 | 33.33 |
| Mine cars, ..... | ..... | ..... | 1 | ..... | ..... | 1 | ..... | 2 | 1 | ..... | ..... | ..... | 5 | 12.82 |
| Explosions of gas, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 5.13 |
| Blasts, premature and otherwise, ..... | ..... | ..... | 1 | ..... | ..... | 1 | ..... | ..... | ..... | 2 | ..... | ..... | 4 | 10.25 |
| Falling into shafts, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 2 | 5.13 |
| Struck by timber, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | 2.57 |
| Suffocated by culm, .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | 2.57 |
| Struck by piece of coal, ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | ..... | 3 | 7.69 |
| Total, | 2 | 2 | 5 | 2 | 2 | 7 | 1 | 5 | 3 | 3 | 4 | 3 | 39 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Suffocated by coal, .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 50.00 |
| Struck by piece of coal, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 50.00 |
| Totals, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2 | 100.00 |
| Grand totals inside and outside, | 2 | 2 | 5 | 3 | 2 | 7 | 1 | 5 | 3 | 3 | 4 | 4 | 41 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | 1 | ..... | 3 | 8.57 |
| Falls of roof, ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 4 | 1 | ..... | ..... | ..... | 6 | 17.14 |
| Mine cars, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 3 | 1 | ..... | 10 | 28.57 |
| Explosions of gas, | 1 | 1 | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... | ..... | ..... | 4 | 11.43 |
| Blasts, premature and otherwise, | 1 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 3 | 8.57 |
| Mules, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2.86 |
| Falling, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2.86 |
| Struck by timber, ..... | ..... | 1 | ..... | ..... | 3 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4 | 11.43 |
| Struck by piece of coal, ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 3 | 8.57 |
| Totals, | 4 | 3 | 2 | 4 | 5 | 4 | ..... | 5 | 3 | 3 | 2 | ..... | 35 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Mules, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 | 20.00 |
| Falling, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | 20.00 |
| Scalded by steam, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | 20.00 |
| Burned by hot ashes, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 20.00 |
| Struck by piece of steel, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 20.00 |
| Totals, | 1 | 1 | ..... | ..... | ..... | ..... | 1 | 1 | ..... | 1 | ..... | ..... | 5 | 100.00 |
| Grand totals inside and outside, | 5 | 4 | 2 | 4 | 5 | 4 | 1 | 6 | 3 | 4 | 2 | ..... | 40 | ..... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|---|--------------|--------------|--------------|----------|--------------|--------------|--------------|--------------|--------------|--------------|----------|-----------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| Inside | | | | | | | | | | | | |
| Assistant mine foremen, | 1 | ..... | ..... | ..... | ..... | 4 | ..... | 3 | 1 | 1 | 1 | 1 |
| Miners, ..... | ..... | 2 | 2 | 2 | 2 | 2 | ..... | ..... | ..... | ..... | ..... | 20 |
| Miners' laborers, | 1 | ..... | ..... | ..... | ..... | 1 | ..... | 1 | 1 | 2 | 1 | 11 |
| Drivers and runners, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3 |
| Company men, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | 1 |
| Footmen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 |
| Motormen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | 1 |
| Carpenters, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, | 2 | 2 | 5 | 2 | 2 | 7 | 1 | 5 | 3 | 3 | 4 | 39 |
| Outside | | | | | | | | | | | | |
| Laborers, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 |
| Miners, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2 |
| Grand totals inside and outside, | 2 | 2 | 5 | 3 | 2 | 7 | 1 | 5 | 3 | 3 | 4 | 41 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|---|----------|----------|--------------|--------------|--------------|--------------|--------------|----------|--------------|----------|--------------|-----------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| Inside | | | | | | | | | | | | |
| Miners, | 1 | 1 | ..... | 2 | 2 | 2 | ..... | 1 | 2 | 1 | ..... | 12 |
| Miners' laborers, | 1 | 1 | 1 | 2 | 2 | 2 | ..... | 3 | 1 | ..... | 1 | 10 |
| Drivers and runners, | 1 | 1 | ..... | 2 | ..... | ..... | ..... | 1 | ..... | 1 | ..... | 6 |
| Doorboys and helpers, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 2 |
| Company men, | 1 | ..... | 1 | ..... | 2 | ..... | ..... | ..... | ..... | ..... | ..... | 6 |
| Totals, | 4 | 3 | 2 | 4 | 5 | 4 | ..... | 5 | 3 | 3 | 2 | 35 |
| Outside | | | | | | | | | | | | |
| Assistant foremen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 |
| Statepickers (boys), ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 |
| Laborers, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 2 |
| Machinists, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, | 1 | 1 | ..... | ..... | ..... | ..... | 1 | 1 | ..... | 1 | ..... | 5 |
| Grand totals inside and outside, | 5 | 4 | 2 | 4 | 5 | 4 | 1 | 6 | 3 | 4 | 2 | 40 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American, | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7 |
| English, | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Welsh, | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 2 |
| Irish, | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 3 |
| German, | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 |
| Polish, | 1 | ... | 1 | 1 | 2 | 3 | ... | 2 | 1 | 1 | 2 | ... | 14 |
| Slavonian, | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Lithuanian, | ... | ... | 3 | ... | ... | ... | ... | ... | 1 | 1 | 1 | 1 | 6 |
| Austrian, | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | 2 |
| Russian, | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 3 |
| Magyar, | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Totals, | 2 | 2 | 5 | 2 | 2 | 7 | 1 | 5 | 3 | 3 | 4 | 4 | 41 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American, | 2 | ... | ... | 1 | 1 | ... | ... | 1 | 1 | 1 | 1 | ... | 8 |
| English, | ... | 1 | 1 | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 4 |
| Welsh, | 1 | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | 3 |
| Irish, | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 |
| Polish, | 1 | 3 | ... | 2 | 2 | ... | ... | 2 | 1 | 3 | ... | ... | 14 |
| Slavonian, | 1 | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 3 |
| Lithuanian, | ... | ... | ... | 1 | 1 | 1 | ... | ... | 1 | ... | 1 | ... | 5 |
| Russian, | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 |
| Magyar, | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 |
| Totals, | 5 | 4 | 2 | 4 | 5 | 4 | 1 | 6 | 3 | 4 | 2 | ... | 40 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Area of furnace bars in square feet | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|---|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|---|-----------------------------------|--|--------------------------|-----------------|-------------------------------------|----------------------------------|---|--|--|-----------------------------------|
| Leligh and Wilkes-Barre Coal Co. Lance Colliery: | Shaft,..... | Gaseous, .. | 3 Fans, . . | 34.3 35 35 | 10.11 11.9 11.9 | 8.4 8.9 8.9 | 52 49 49 | 2.1 2.1 2.1 | Gulbal, .. | Steam, | .. | 12 | 267,440 | 186,340 | 336,800 | 502 |
| Nottingham No. 15 Colliery: | Shaft,..... | Gaseous, .. | 5 Fans, . . | 24 24 24 24 23.9 5 | 7.10 8 8 8 6.7 1.4 | 6.0 6.0 6.0 6.0 5.10 1.0 | 70 70 73 73 60 300 | 2.1 2.1 2.1 2.1 1.8 | Gulbal, .. | Steam, ..... | ..... | 21 | 424,979 | 238,235 | 499,170 | ..... |
| Reynolds, | Slope, | Gaseous, .. | 2 Fans, . . | 23.9 5 | 6.7 1.4 | 5.10 1.0 | 300 | ..... | Sturtevant | Electricity, .. | ..... | 1 | 28,500 | 13,000 | 45,000 | 40 |
| Inman No. 21 Colliery: | Shaft,..... | Gaseous, .. | Fan, | 15 | 4.6 | 4.0 | 75 | .7 | Gulbal, .. | Steam, ..... | ..... | 1 | 206,990 | 155,290 | 224,090 | 218 |
| Buttonwood No. 22 Colliery: | Shaft,..... | Gaseous, .. | 3 Fans, . . | 35 35 6 | 11.9 11.9 4 | 10.6 10.6 9 | 50 50 120 | 2.1 2.1 1.5 | Gulbal, .. Vulcan, .. | Steam, ..... | ..... | 11 | 206,990 | 155,290 | 224,090 | 218 |
| Buttonwood, | Tunnel, .. | Gaseous, .. | 2 Fans, . . | 24 20 | 8 5.8 | 7.4 5.8 | 70 80 | 2.1 2.1 | Gulbal, .. | Electricity, .. | ..... | 6 | 54,906 | 43,780 | 60,070 | 134 |
| Parrish, | Slope, | Gaseous, .. | 2 Fans, . . | 20 | 5.8 | 5.8 | 80 | 2.1 | Gulbal, .. | Steam, ..... | ..... | 6 | 54,906 | 43,780 | 60,070 | 134 |

TABLE I.—Continued

| Names of Operators and Mines | Number of persons employed inside | 130 | 36 |
|------------------------------------|--|----------------|----------------|
| | Number of cubic feet of air per minute passing out at outlet | 89,775 | 39,500 |
| | Total number of cubic feet of air per minute circulating in all the splits | 79,380 | 36,350 |
| | Number of cubic feet of air per minute entering the mine at inlet | 79,375 | 38,000 |
| | Number of splits of air currents | 8 | 3 |
| | Area of furnace bars in square feet | .. | .. |
| Power used | ..... | ..... | ..... |
| Name of fan | ..... | ..... | ..... |
| Water gauge developed—in inches | ..... | ..... | ..... |
| Number of revolutions per minute | ..... | ..... | ..... |
| Depth of blades in feet and inches | ..... | ..... | ..... |
| Width of blades in feet and inches | ..... | ..... | ..... |
| Diameter of fan in feet and inches | ..... | ..... | ..... |
| Method of ventilation | Natural, .. | Natural, .. | Natural, .. |
| Gaseous or non-gaseous | Non-gas., .. | Non-gas., .. | Non-gas., .. |
| Kind of opening | Slope, ... } 6 drifts, ... } Tunnel, ... } | Slope, } | Slope, } |
| | West Nanticoke Coal Co. West Nanticoke Colliery: { West Nanticoke, } Plymouth Red Ash Coal Co. Red Ash Colliery: { Red Ash, } | | |

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|---|----------------|--------------------------------|---------------------|----------------------------|---------------------|--|
| Lehigh and Wilkes-Barre Coal Co. | | | | | | |
| Lance No. 11, | | | | | | |
| Nottingham No. 15, | | | | | | |
| Inman No. 21, | | | | | | |
| Buttwood No. 22, | Luzerne, | C. F. Huber, General Manager. | Wilkes-Barre, | E. J. Newbaker, | Wilkes-Barre, | C. R. R. of N. J. |
| Washeries | | | | | | |
| Buttwood, | | | | | | |
| Parrish, | | | | | | |
| Delaware, Lackawanna and Western Railroad Co. | | | | | | |
| Avondale, | Luzerne, | C. E. Tobey, | Scranton, | H. G. Davis, | Kingston, | D. L. and W. |
| Loomis, | | | | | | |
| Woodward, | | | | | | |
| Delaware and Hudson Co. | | | | | | |
| Plymouth Nos. 2, 3, 5, | Luzerne, | E. R. Pettebone, | Scranton, | Charles Dorrance, Jr. | Scranton, | D. and H. |
| Washeries | | | | | | |
| Plymouth Nos. 3 and 5, | | | | | | |
| Kingston Coal Co. | | | | | | |
| Kingston No. 2, | Luzerne, | F. E. Zerbey, | Kingston, | Thomas H. Williams | Kingston, | D. L. and W., D. and H. L. V., Penna., and C. R. R. of N. J. |
| Gaylord, | | | | R. A. Smith, | Plymouth, | D. L. and W., D. and H. C. R. R. of N. J. and Penna. |
| George F. Lee Coal Co. | | | | | | |
| Chauncey, | Luzerne, | George F. Lee, | Wilkes-Barre, ..... | ..... | ..... | D. L. and W. |
| West Nanticoke Coal Co. | | | | | | |
| West Nanticoke, | Luzerne, | A. D. W. Smith, | Wilkes-Barre, | Edwin W. Davies, .. | Dorrancton, | Pennsylvania |
| Plymouth Red Ash Coal Co. | | | | | | |
| Red Ash, | Luzerne, | W. L. Schlager, | Scranton, ..... | ..... | ..... | D. L. and W. |

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|--|-------------|--|--|--|--|----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|---|---|---|-----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Lehigh and Wilkes-Barre Coal Co. Lehigh No. 11, Northampton No. 15, Luzerne No. 21, Bottomwood No. 22, | Luzerne, .. | { 387,833 530,751 153,364 1,076,948 } | { 31,454 64,340 35,161 130,955 } | { 4,031 13,388 2,245 19,664 } | { 423,318 608,479 196,770 1,227,567 } | { 213 202 166 } | { 802 1,147 615 2,564 } | { 1 8 2 11 } | { 8 4 6 18 } | { 311,825 317,175 90,825 719,825 } | { 2,238 10,269 19,299 31,806 } | { 22,500 245 63,477 86,222 } | { 113 182 78 373 } |
| Buttonwood, Farrish, Totals, | Luzerne, .. | { 104,902 153,119 283,021 1,334,969 } | { 19,012 43,087 62,099 193,054 } | { 6,045 6,045 25,769 } | { 123,914 202,251 326,165 1,553,732 } | { 241 251 } | { 36 63 99 2,663 } | { 11 } | { 18 } | { 719,825 } | { 31,806 } | { 86,222 } | { 8 8 381 } |
| Delaware, Lackawanna and Western Railroad Co., Avondale, Loomis, Woodward, Totals, | Luzerne, .. | { 131,255 245,264 926,820 1,303,339 } | { 17,290 40,750 58,040 } | { 2,021 8,969 10,990 } | { 150,566 245,264 976,539 1,372,369 } | { 205 206 234 } | { 410 547 1,814 2,771 } | { 1 4 9 14 } | { 1 4 5 } | { 50,475 162,235 730,475 943,175 } | { 2,882 17,730 22,300 42,912 } | { 12,194 65,500 151,547 229,181 } | { 46 19 129 191 } |

*Developing.

| | | | | | | | | | | | | | |
|-------------------------|---------------------------|-------------|---------|---------|-----------|-------|--------|-------|-------|-----------|---------|---------|-------|
| Delaware and Hudson Co. | Plymouth No. 3, | { 215,596 | 18,402 | ..... | 223,998 | 190 | 478 | 3 | 4 | 128,220 | 3,636 | 350 | 43 |
| | Plymouth No. 2, | { 464,707 | 8,904 | 7,130 | 472,641 | 262 | 968 | 3 | 2 | 369,000 | 7,085 | 7,550 | 87 |
| | Plymouth No. 3, | { 282,036 | 6,215 | 4,176 | 302,417 | 171 | 1,001 | 3 | 6 | 242,800 | 3,744 | ..... | 107 |
| | Plymouth No. 5, | { 972,329 | 25,429 | 11,306 | 1,009,056 | ..... | 2,447 | 9 | 12 | 740,020 | 14,465 | 7,900 | 237 |
| Washeries | Plymouth No. 3, | { 6,377 | 83,914 | ..... | 90,291 | 40 | * | ..... | ..... | ..... | ..... | ..... | ..... |
| | Plymouth No. 5, | { 26,846 | 26,846 | ..... | 26,846 | 171 | † | ..... | ..... | ..... | ..... | ..... | ..... |
| | Totals, | { 6,377 | 110,760 | ..... | 117,137 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | Totals, | { 978,706 | 136,181 | 11,306 | 1,126,193 | ..... | 2,447 | 9 | 12 | 740,020 | 14,465 | 7,900 | 237 |
| Kingston Coal Co. | Kingston No. 2, | { 487,912 | 20,000 | 70,713 | 578,625 | 247 | 1,290 | 4 | 1 | 386,925 | 8,350 | 1,500 | 122 |
| | Gaylord, | { 138,286 | 20,000 | 15,491 | 173,687 | 230 | 392 | 2 | ..... | 62,500 | 10,600 | ..... | 50 |
| | Totals, | { 626,198 | 40,000 | 86,114 | 752,312 | ..... | 1,682 | 6 | 1 | 449,425 | 18,950 | 1,500 | 172 |
| | Totals, | { 626,198 | 40,000 | 86,114 | 752,312 | ..... | 1,682 | 6 | 1 | 449,425 | 18,950 | 1,500 | 172 |
| George F. Lee Coal Co. | Chauncey, | { 115,478 | 7,300 | 2,735 | 125,513 | 247 | 371 | 1 | 1 | 24,375 | 14,650 | ..... | 50 |
| | West Nanticoke, | { 93,717 | ..... | ..... | 93,717 | 273 | 156 | ..... | 2 | 46,875 | 4,065 | 3,300 | 17 |
| | Plymouth Red Ash Coal Co. | { 10,997 | ..... | 3,314 | 14,311 | 193 | 49 | ..... | 1 | 6,250 | 1,535 | 2,450 | 1 |
| | Grand totals, | { 4,463,404 | 434,575 | 140,168 | 5,038,147 | ..... | 10,139 | 41 | 40 | 2,929,945 | 128,973 | 330,552 | 1,052 |

*Employees included with Plymouth No. 3.

†Employees included with Plymouth No. 5.

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | Locomotives | | | | Number of steam engines of all classes | Total horse power | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors | | |
|--|----------|-------------------|-------------|---------|-------------|-------------------|----------|-------|-------|--|-------------------|--------------------------------|--|----------------------------|---------------------------|----------|-------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Air | | | | | | | Electric | |
| Lehigh and Wilkes-Barre Coal Co., | Luzerne, | ..... | ..... | 59 | 10,525 | 10,525 | ..... | 3 | 7 | 5 | 181 | 18,493 | 14 | 14,050 | 7,050 | 1 | 8 |
| Delaware, Lackawanna and Western Railroad Co., |  | ..... | ..... | 24 | 5,400 | 5,400 | ..... | 6 | ..... | 31 | 88 | 14,361 | 13 | 16,425 | 9,525 | 6 | 3 |
| Delaware and Hudson Co., |  | ..... | ..... | 30 | 7,740 | 7,740 | ..... | ..... | ..... | ..... | 234 | 13,084 | 10 | 14,900 | 4,150 | 2 | 6 |
| Kingston Coal Co., |  | ..... | ..... | 13 | 3,450 | 3,450 | ..... | 7 | ..... | 6 | 39 | 4,750 | 3 | 2,940 | 1,600 | 1 | 1 |
| George F. Lee Coal Co., |  | ..... | ..... | 5 | 310 | 310 | ..... | ..... | ..... | ..... | 5 | 260 | ..... | ..... | ..... | ..... | ..... |
| West Nanticoke Coal Co., |  | ..... | ..... | ..... | 75 | 75 | ..... | 1 | ..... | 4 | ..... | 129 | ..... | ..... | ..... | ..... | ..... |
| Plymouth Red Ash Coal Co., |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ..... |
| Totals, | ..... | ..... | ..... | 132 | 27,500 | 27,500 | ..... | 17 | 7 | 46 | 547 | 51,077 | 40 | 48,315 | 22,325 | 17 | 18 |

TABLE 3.—Number of each class of employes inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | | Outside | | | | | | | | Grand total | |
|--|---------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|--------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|--------------------|---------------|--------|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employes | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | Bookkeepers and clerks | All other employes | Total outside | |
| Lehigh and Wilkes-Barre Coal Co., Luzerne | Luzerne | 5 | 4 | 44 | 711 | 481 | 228 | 102 | 26 | 454 | .... | 2,055 | .. | 4 | 24 | 120 | 146 | 35 | 12 | 267 | 698 | 2,653 |
| Delaware, Lackawanna and Western Railroad Co., Luzerne | Luzerne | 6 | 7 | 23 | 754 | 776 | 123 | 77 | 18 | .... | 574 | 2,358 | .. | 3 | 31 | 60 | 55 | .... | 6 | 258 | 413 | 2,771 |
| Delaware and Hudson Co., Luzerne | Luzerne | 4 | 5 | 18 | 490 | 687 | 237 | 61 | 18 | 241 | 47 | 1,808 | .. | 6 | 28 | 120 | 69 | 105 | 4 | 307 | 639 | 2,447 |
| Kingston Coal Co., Luzerne | Luzerne | 5 | 18 | 4 | 531 | 396 | 148 | 11 | 2 | 100 | 97 | 1,312 | .. | 3 | 43 | 39 | 35 | 5 | 5 | 251 | 370 | 1,682 |
| George F. Lee Coal Co., Luzerne | Luzerne | 1 | 1 | 1 | 75 | 98 | 29 | .... | .... | 43 | 21 | 269 | .. | 2 | 3 | 7 | 27 | 4 | 1 | 58 | 102 | 371 |
| West Nanticoke Coal Co., Luzerne | Luzerne | 1 | 1 | 1 | 47 | 65 | 12 | .... | .... | 3 | .... | 130 | .. | .... | 2 | 4 | 5 | .... | 1 | 14 | 26 | 156 |
| Plymouth Red Ash Coal Co., Luzerne | Luzerne | 1 | 1 | .... | 11 | 16 | 3 | .... | .... | 2 | 2 | 36 | 1 | 1 | .... | 2 | 3 | .... | .... | 6 | 13 | 49 |
| Totals | | 23 | 37 | 91 | 2,619 | 2,519 | 780 | 251 | 64 | 843 | 741 | 7,968 | 3 | 19 | 131 | 352 | 307 | 169 | 29 | 1,161 | 2,171 | 10,139 |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|------------------------|--------------------------|----------------|--------------------------|-----|-------------------|------------------|-------------------|-----------------------|------------|---|
| Jan. 20 | William Jones, | Welsh, | Assistant foreman, | 51 | M. | 1 | 2 | Nottingham No. 15, .. | Lancashire | Killed by fall of roof on slope. |
| Feb. 28 | Paul Yeratskie, | Polish, | Laborer, | 27 | S. | 1 | 1 | Woodward, | | Killed by falling down shaft. |
| Feb. 9 | Patrick O'Boyle, | Irish, | Miner, | 47 | M. | 1 | 1 | Gayward, | | Killed by fall of roof at face of chamber. |
| March 10 | John Fazon, | Russian, | Miner, | 43 | M. | 1 | 5 | Nottingham No. 15, .. | | Killed by coal rolling at face of chamber. |
| March 1 | Alexander Gregonakis, .. | Lithuanian, .. | Miner, | 37 | M. | 1 | 2 | Woodward, | | Killed by fall of roof at face of chamber. |
| 23 | Joseph Szulstus, | Lithuanian, .. | Laborer, | 39 | S. | 1 | 1 | Woodward, | | Killed by fall of roof at face of chamber. |
| 26 | Stanley Petcavage, | Polish, | Laborer, | 32 | M. | 1 | 3 | Nottingham No. 15, .. | | Killed by explosion of blast on slope. |
| 30 | Patrick McGinness, | Irish, | Laborer, | 28 | M. | 1 | 2 | Kingston No. 2, | | Killed by fall of roof at face of chamber. |
| April 30 | William Matthews, | English, | Miner, | 48 | M. | 1 | 1 | Woodward, | | Killed by fall of roof at face of chamber. |
| 25 | George Baunis, | Polish, | Miner, | 45 | M. | 1 | 1 | Plymouth No. 3, | | Killed by fall of slate at face of chamber. |
| 26 | Andrew Klocz, | Slavonian, .. | Miner, | 39 | S. | 1 | 1 | Lance No. 11, | | Killed by being struck on head by piece of side that fell from ascending cage. Out- |
| May 14 | Martin Soha, | Polish, | Miner, | 27 | S. | 1 | 1 | Loomis, | Lancashire | Killed by fall of coal in cross-cut. |
| 19 | Anthony Clemensky, | Polish, | Miner, | 23 | S. | 1 | 1 | Woodward, | | Killed by fall of coal at face of chamber. |
| June 1 | William Morris, | Welsh, | Runner, | 27 | S. | 1 | 1 | Kingston No. 2, | | Killed by cars on gangway. |
| 13 | Michael Keller, | German, | Miner, | 41 | S. | 1 | 2 | Nottingham No. 15, .. | | Killed by fall of coal at face of chamber. |
| 15 | Stanley Young, | American, .. | Miner, | 23 | M. | 1 | 2 | Chauncy, | | Killed by fall of roof at face of chamber. |
| 23 | John Haddock, | Polish, | Laborer, | 23 | M. | 1 | 2 | Loomis, | | Killed by fall of roof at face of chamber. |
| 22 | William Przibyski, | Polish, | Miner, | 53 | M. | 1 | 2 | Plymouth No. 2, | | Killed by explosion of blast at face of chamber. |
| Charles Litz, | Polish, | Miner, | 40 | M. | 1 | 1 | 4 | Nottingham No. 15, .. | | Fatally burned by explosion of gas in chamber. |
| Peter Pochinyak, | Russian, .. | Laborer, .. | 23 | M. | 1 | 1 | 1 | Nottingham No. 15, .. | | Fatally burned by explosion of gas in chamber. |
| July 30 | Andrew Smith, | American, .. | Carpenter, .. | 33 | M | 1 | 1 | Plymouth No. 5, | | Killed by being struck by piece of coal in shaft. |
| Aug. 2 | John Gabriel, | Polish, | Miner, | 63 | M. | 1 | 3 | Plymouth No. 2, | Lancashire | Killed by fall of roof at face of chamber. |
| 17 | Thomas Thomas, | American, .. | Motorman, .. | 22 | S. | 1 | 4 | Woodward, | | Killed by cars on gangway. |
| 18 | Joseph Jerrie, | Magyar, | Miner, | 44 | M. | 1 | 3 | Woodward, | | Killed by fall of coal at face of chamber. |
| 19 | John I. Jones, | Austrian, .. | Driver, | 27 | M. | 1 | 3 | Plymouth No. 5, | | Killed by cars on slope. |
| 11 | Michael Egan, | Austrian, .. | Miner, | 53 | M. | 1 | 2 | Rutlandwood No. 2, .. | | Suffocated by rush of culm in chamber. |
| 25 | James Butler, | American, .. | Footman, | 29 | M. | 1 | 2 | Woodward, | | Killed by fall of roof at face of chamber. |
| 23 | William O'Hara, | Polish, | Laborer, | 40 | M. | 1 | 1 | Plymouth No. 2, | | Killed by cars on slope. |
| Oct. 7 | Anthony Szmonska, | Lithuanian, .. | Laborer, | 32 | S. | 1 | 1 | Plymouth No. 3, | | Killed by fall of coal at face of chamber. |

TABLE 4.—Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|------|--------------------------|---------------|--------------|-----|-------------------|------------------|-------------------|------------------------|----------|--|
| Oct. | 20 Whitefield Warmouth, | American,... | Miner, | 39 | M. | 1 | 1 | Kingston No. 2, | | Killed by explosion of blast at face of chamber. |
| | 26 Anthony Mushel, | Polish, | Laborer, ... | 35 | M. | 1 | 3 | Avondale, | | Killed by explosion of blast at face of chamber. |
| Nov. | 5 Miran Kaminsky, | Polish, | Miner, | 48 | M. | 1 | 7 | Plymouth No. 3, | | Killed by piece of coal in chamber sliding on him. |
| | 8 Richard Stires, | American,... | Miner, | 40 | M. | 1 | 5 | Gaylord, | | Killed by fall of coal on gangway. |
| | 10 William Jelmskie, ... | Polish, | Laborer, ... | 31 | S. | ... | ... | Nottingham No. 15, ... | Lucerne. | Killed by falling off cage into shaft. |
| | 29 Peter Serka, | Lithuanian, | Laborer, ... | 28 | S. | ... | ... | Nottingham No. 15, ... | | Killed by fall of coal at face. |
| Dec. | 15 John Mauze, | American,... | Laborer, ... | 36 | S. | ... | ... | Woodward, | | Suffocated in coal. He got on a railroad car before the hoppers were opened and was pulled through. Outside. |
| | 17 John Ayers, | Irish, | Company man. | 29 | M. | 1 | 2 | Buttonwood No. 22, .. | | Killed by timber falling on him in chamber. |
| | 21 William Kossa, | Lithuanian, | Miner, | 45 | M. | 1 | ... | Plymouth No. 5, | | Killed by fall of roof at face of chamber. |
| | | Russian, ... | Laborer, ... | 33 | M. | 1 | ... | Kingston No. 2, | | Killed by fall of roof at face of chamber. |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|-------------------------|-----------------|------------------|-----|-------------------|------------------------|----------|---|
| Jan. 11 | Stanley Skudalski, ... | American, ... | Driver, ... | 19 | S. | Plymouth No. 3, ... | Luzerne, | Hand crushed by cars on gangway. |
| 16 | John King, ... | Welsh, ... | Company man, ... | 39 | M. | Buttonwood No. 22, ... | | Ribs fractured by cars on gangway. |
| 29 | Andrew Horitz, ... | Slavonian, ... | Laborer, ... | 60 | M. | Plymouth No. 2, ... | | Face and hands burned by explosion of gas in old chamber. |
| 25 | Charles Bolan, ... | American, ... | Machinist, ... | 37 | M. | Nottingham No. 15, ... | | Eye lacerated by flying steel. Outside. |
| 25 | George Maraskie, ... | Polish, ... | Miner, ... | 49 | M. | Lance No. 11, ... | | Ribs fractured by explosion of blast at face of chamber. |
| Feb. 5 | Joseph Tropole, ... | Polish, ... | Laborer, ... | 27 | M. | Kingston No. 2, ... | | Contusion of back by rock sliding from gob in chamber. |
| 13 | Costik Lysyskie, ... | Polish, ... | Laborer, ... | 19 | S. | Plymouth No. 2, ... | | Hands and face burned by hot ashes. Out- |
| 19 | William Came, ... | English, ... | Runner, ... | 18 | S. | Buttonwood No. 22, ... | | Back bruised. Struck by timber on slope. |
| 19 | John Lasoskie, ... | Polish, ... | Miner, ... | 26 | S. | Lance No. 11, ... | | Face and hands burned by explosion of gas at face of chamber. |
| March 7 | William Owens, ... | Welsh, ... | Company man, ... | 56 | M. | Buttonwood No. 22, ... | | Fingers cut off by cars on gangway. |
| 10 | Michael Burrow, ... | Slavonian, ... | Laborer, ... | 53 | M. | Plymouth No. 5, ... | | Leg fractured by coal rolling on him on slope. |
| April 8 | Anthony Wayewodzki, ... | Polish, ... | Miner, ... | 46 | M. | Plymouth No. 2, ... | Luzerne, | Arm bruised by cars in chamber. |
| 12 | Michael Olenker, ... | Polish, ... | Driver, ... | 19 | S. | Buttonwood No. 22, ... | | Back bruised by cars on gangway. |
| 17 | John Bolia, ... | Lithuanian, ... | Miner, ... | 40 | M. | Lance No. 11, ... | | Eye destroyed by explosion of blast at face of chamber. |
| 22 | Willard Toney, ... | American, ... | Runner, ... | 22 | S. | Plymouth No. 5, ... | | Jaw fractured by being kicked by a mule on gangway. |
| May 14 | Joseph Wychulis, ... | Lithuanian, ... | Miner, ... | 40 | M. | Buttonwood No. 22, ... | | Backway injured by prop falling on him at face of chamber. |
| | Joseph Shusto, ... | Polish, ... | Company man, ... | 30 | M. | Lance No. 11, ... | | Rib fractured by prop falling on him at face of chamber. |
| | Joseph Blake, ... | Irish, ... | Company man, ... | 23 | S. | Lance No. 11, ... | | Chest bruised by prop falling on him at face of chamber. |
| 15 | Adam Butler, ... | Polish, ... | Miner, ... | 33 | M. | Lance No. 11, ... | | Ankle fractured by fall of coal at face of chamber. |
| 17 | Samuel Seaples, ... | American, ... | Company man, ... | 30 | S. | Nottingham No. 15, ... | | Foot fractured by falling in chamber. |
| June 18 | Andrew Kondrack, ... | Russian, ... | Laborer, ... | 38 | S. | Woodward, ... | Luzerne, | Legs fractured by fall of roof in cross-cut. |
| 7 | Frank Mozdine, ... | Magyar, ... | Miner, ... | 33 | M. | Woodward, ... | | Thigh and ribs fractured by fall of coal at face of chamber. |
| 22 | James Reese, ... | Welsh, ... | Miner, ... | 63 | S. | Woodward, ... | | Face and hands burned by explosion of gas on gangway. |

TABLE 5.—Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|------------------------|-------------------|-----------------------|-----|-------------------|-----------------------|----------|--|
| June 22 | John Romanski, | Lithuanian, | Laborer, | 25 | S. | Woodward, | Luzerne, | Face and hands burned by explosion of gas on gangway. |
| July 6 | Gilbert Young, | English, | Assistant foreman, .. | 53 | M. | Chauncey, | | Ribs fractured by being kicked by a mule that he was passing in stable. Outside. |
| Aug. 9 | Stephen Collins, | English, | Miner, | 52 | S. | West Nanticoke, | | Collar bone fractured by fall of roof at face of chamber. |
| 10 | Michael Petro, | Slavonian, .. | Laborer, | 57 | M. | Plymouth No. 3, | | Leg fractured by fall of roof at face of chamber. |
| 13 | Stephen Grisko, | Polish, | Laborer, | 24 | M. | Plymouth No. 5, | | Leg fractured by fall of roof in chamber. |
| 19 | William Jones, | Welsh, | Driver, | 48 | S. | Futtswood No. 22, .. | | Leg fractured by fall of roof on gangway. |
| 23 | Joseph Roberts, | Polish, | Laborer, | 22 | S. | West Nanticoke, | | Leg fractured by coal rolling on him in chamber. |
| 31 | James Wright, | American, .. | Laborer, | 44 | S. | Plymouth No. 5, | | Burned by steam on ash bank. Outside. |
| Sept. 17 | Stanley Lapsinski, .. | Polish, | Miner, | 63 | M. | Nottingham No. 15, .. | | Leg fractured by explosion of blast at face of chamber. |
| 25 | John Shuman, | Lithuanian, .. | Miner, | 29 | M. | Plymouth No. 2, | | Foot bruised by cars in chamber. |
| 30 | John Eley, | American, .. | Laborer, | 26 | M. | Red Ash, | | Foot fractured by fall of roof at face of chamber. |
| Oct. 7 | Andrew Yovochek, .. | Polish, | Doorboy, | 18 | S. | Loomis, | | Leg fractured by cars on gangway. |
| 15 | Alexander Kosecka, .. | Polish, | Statepicker, | 15 | S. | Lance No. 11, | | Scalp lacerated by falling into elevator pit in breaker. Outside. |
| 20 | James Burns, | American, .. | Runner, | 46 | M. | Plymouth No. 5, | | Arm fractured by cars on gangway. |
| 28 | Phillip Gould, | Polish, | Miner, | 17 | M. | Lance No. 11, | | Foot bruised by cars on gangway. |
| Nov. 29 | Joseph Minschick, .. | American, .. | Doorboy, | 17 | S. | Plymouth No. 5, | | Foot bruised by cars on gangway. |
| | Frank Yeast, | Lithuanian, .. | Laborer, | 24 | S. | Nottingham No. 15, .. | | Body bruised by fall of coal at face of chamber. |

CONDITION OF COLLIERIES

LEHIGH AND WILKES-BARRE COAL COMPANY

Lance No. 11, Nottingham No. 15, Inman No. 21, and Buttonwood No. 22 Collieries.—Safety conditions, ventilation and drainage, good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Avondale, Loomis and Woodward Collieries.—Safety conditions, ventilation and drainage, good.

DELAWARE AND HUDSON COMPANY

Plymouth Nos. 2, 3 and 5 Collieries.—Safety conditions, ventilation and drainage, good.

KINGSTON COAL COMPANY

Kingston No. 2 and Gaylord Collieries.—Safety conditions, ventilation and drainage, good.

GEORGE F. LEE COAL COMPANY

Chauncey Colliery.—Safety conditions, ventilation and drainage, good.

WEST NANTICOKE COAL COMPANY

West Nanticoke Colliery.—Safety conditions, ventilation and drainage, good.

PLYMOUTH RED ASH COAL COMPANY

Red Ash Colliery.—Safety conditions, ventilation and drainage, good.

IMPROVEMENTS

LEHIGH AND WILKES-BARRE COAL COMPANY

Lance No. 11 Colliery.—Completed No. 30 tunnel, Hillman to Stanton; tunnel, Baltimore to Baltimore off No. 4 slope; and No. 31 tunnel, Baltimore to Cooper vein.

Nottingham No. 15 Colliery.—Completed No. 6 tunnel, Top Ross to Ross. Installed a 14 by 48 inch pump on shaft level, and a new pumping station on 11th East.

Inman No. 21 Colliery.—Completed East tunnel from Hillman shaft level.

Buttonwood No. 22 Colliery.—Installed an electric pump on No. 3 slope, and an electric hoist on No. 13 slope.

In the Parrish mine an electric haulage was installed on No. 13 slope, also two electric locomotives. Completed No. 10 tunnel, and

tunnel airway, Abbott to Abbott; No. 15 tunnel, Baltimore to Five-Foot; No. 9 rock plane, Stanton to Hillman, and rock slope on shaft level.

Outside: Completed an oil and lamphouse, washhouse, lumber shed and motor house. Installed a 27 by 40 by 22½ by 30 inch air compressor and fuel conveyor.

At the Parrish, changes were made to breaker so as to connect with washery operations. Completed lamphouse and inside foreman's office, oilhouse and blacksmith shop.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Avondale Colliery.—Completed rock tunnel from Ross vein across measures to Hillman vein, a distance of 1650 feet, and made a second opening for same; also rock tunnel through fault in No. 10 slope and rock return airway, parallel with No. 2 slope, to assist in ventilating the live workings. Built a blacksmith and carpenter shop of concrete and brick. Installed pumps for unwatering the mine workings flooded in November, 1910, and pumping equipment in No. 5 slope section of Ross vein. The installation of this pumping equipment has been very costly and the expense of reopening the colliery shows that to mine anthracite coal in the Wyoming Valley requires capital, as the dangers from flooding are quite imminent.

Loomis Colliery.—This colliery is, perhaps, the most wonderful operation of its kind in style and construction, that has ever been erected in the anthracite region. The breaker building and annex or washery is practically fireproof, and is constructed of concrete, steel and wire glass, and all the other buildings are most modern in their equipment. The breaker will be completed during the year 1916. It is electrically operated, with separate units, and is expected to have a large capacity. There are already miles of gangway developed, so that a large tonnage might be expected as soon as the breaker is placed in operation. The work of sinking No. 3 shaft, near the Susquehanna River, is underway. The shaft will be sunk to a depth of about 660 feet to the Hillman vein. The old Dundee shaft is also to be widened and sunk to the Ross vein bed.

Woodward Colliery.—Preparations are now being made to reconstruct the breaker of concrete, steel and wire glass; this building was placed in operation during the year 1888. It has been a large producer for the past ten years. It was the first breaker that prepared 1,000,000 tons of coal in a year, which was accomplished in 1905. Side walls are being built and "I" beams placed for roof support, instead of ordinary mine timber along the haulage roads. This is in line with the progressive movement established some years ago by this company. Completed the driving of rock tunnels for the necessary development and transportation of the coal.

DELAWARE AND HUDSON COMPANY

Plymouth No. 2 Colliery.—In November the breaker was abandoned and the coal is now being prepared at Plymouth No. 5 breaker. Completed a tunnel, 290 feet, from the Stanton vein to the Hillman vein.

Plymouth No. 3 Colliery.—Rock plane was driven from Stanton vein to Hillman vein, a distance of 300 feet.

Plymouth No. 5 Colliery.—The breaker has been entirely remodeled. In the Boston section, a tunnel 80 feet in length was driven from the Bennett vein to the Cooper vein.

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—Inside: In No. 2 shaft, completed two short tunnels from Cooper vein to Bennett vein for a second opening; also two short tunnels from Cooper vein to Lance vein for a second opening. In the old slope, a new traveling way for men and mules was completed from Red Ash lower level to top lift.

Outside: Installed a 10,000 gallon water tank. Completed two concrete powder houses.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in Plymouth, June 6 and 7. The Board of Examiners was composed of David T. Davis, Mine Inspector, Wilkes-Barre; H. G. Davis, Superintendent, Kingston; George W. Raub, Miner, and Lewis R. Thomas, Miner, Plymouth.

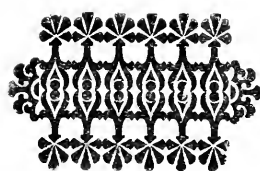
The following persons passed a satisfactory examination and were granted certificates:

MINE FOREMEN

Nathan W. Bittenbender, Frank Coggins, Elijah B. Dobson, Ezra M. Griffith, William B. Jones, Price Lloyd, Arthur Williams, Plymouth; James J. Duffy, Kingston; William C. Thomas, Edwardsville.

ASSISTANT MINE FOREMEN

George Barney, William J. Davis, Walter Peter Dajnowski, Richard Edwards, Fred B. Hick, Evan Hopkins, Samuel C. Heller, Howell T. Jenkins, Ignaz Kosmela, Joseph Leedock, Frank Munday, James H. Morgan, Felix Pohola, John B. Rees, William Richards, Joseph Stukowski, Frank Sobashinski, Walter Symons, Cornelius Shovlin, Joseph R. Thomas, Joseph Turek, Isaac J. Thomas, Thomas Taylor, Frank Walters, Martin Zola, Plymouth; Thomas Brislin, West Nanticoke; Alfred M. Clark, Alfred Jones, Stephen M. Lodwick, Griffith Roberts, Bert Smith, Albert G. Wilczak, Edwardsville; Evan J. Evans, Forty Fort; Michael Farrell, William Meyers, Larksville; John Powell, David T. Morgan, Kingston.



TENTH DISTRICT

LUZERNE COUNTY

Nanticoke, Pa., February 19, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Tenth Anthracite District, for the year ending December 31, 1915, as required by law.

Respectfully submitted,

JOSEPH J. WALSH,
Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 10 |
| Number of mines, | 47 |
| Number of mines in operation, | 46 |
| Number of tons of coal shipped to market, | 4,535,225 |
| Number of tons used at mines for steam and heat, | 417,884 |
| Number of tons sold to local trade and used by employes, | 64,620 |
| Number of tons produced, | 5,017,729 |
| Number of tons produced by compressed air machines, ..... | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 8,446 |
| Number of persons employed outside, | 2,568 |
| Number of fatal accidents inside of mines, | 24 |
| Number of fatal accidents outside, | 2 |
| Number of non-fatal accidents inside of mines, | 23 |
| Number of non-fatal accidents outside, | 5 |
| Number of tons of coal produced per fatal accident inside, | 209,072 |
| Number of tons produced per fatal accident outside,... | 2,508,864 |
| Number of tons produced per fatal accident inside and outside, | 192,990 |
| Number of persons employed per fatal accident inside, | 352 |
| Number of persons employed per fatal accident outside, | 1,284 |
| Number of persons employed per fatal accident inside and outside, | 424 |
| Number of persons employed per non-fatal accident inside, | 367 |
| Number of persons employed per non-fatal accident outside, | 514 |
| Number of persons employed per non-fatal accident inside and outside, | 393 |
| Number of wives made widows, | 17 |
| Number of children made orphans, | 37 |
| Number of steam locomotives used inside of mines,.... | 2 |
| Number of steam locomotives used outside, | 32 |
| Number of compressed air locomotives used inside, ... | 12 |
| Number of compressed air locomotives used outside, ..... | ..... |
| Number of electric motors used inside, | 76 |
| Number of electric motors used outside, | 9 |
| Number of gasoline locomotives used inside, | 2 |
| Number of fans in use, | 46 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 36 |
| Number of non-gaseous mines in operation, | 11 |
| Number of new mines opened, | 1 |
| Number of old mines abandoned, | 3 |

TABLE A
PRODUCTION OF COAL

| Names of Operators | Tons |
|---|-----------|
| Delaware, Lackawanna and Western Railroad Com- pany, | 1,940,320 |
| Susquehanna Coal Company, | 1,591,142 |
| West End Coal Company, | 578,231 |
| Lehigh and Wilkes-Barre Coal Company, | 500,307 |
| Alden Coal Company, | 329,894 |
| E. S. Stackhouse Coal Company, | 77,835 |
| Total, | 5,017,729 |

Production by Counties

| | |
|----------------|-----------|
| Luzerne, | 5,017,729 |
|----------------|-----------|

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|--|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| Delaware, Lackawanna and Western Railroad Co., | 6 | 2 | 8 | 6 | 2 | 8 | 323,387 | 970,160 | 3,214 | 583 | 3,797 | 536 | ..... | 1,607 | ..... |
| Susquehanna Coal Co., | 8 | 1 | 9 | 9 | 1 | 10 | 198,893 | 198,893 | 2,863 | 1,274 | 4,137 | 358 | 1,274 | 358 | 435 |
| West End Coal Co., | 4 | 1 | 5 | 5 | 1 | 6 | 144,658 | 82,604 | 924 | 278 | 1,202 | 231 | 278 | 132 | 278 |
| Lehigh and Wilkes-Barre Coal Co., | 4 | 1 | 5 | 4 | 1 | 5 | 123,077 | 100,061 | 703 | 190 | 893 | 176 | ..... | 141 | 190 |
| Alden Coal Co., | 2 | ..... | 2 | ..... | ..... | ..... | 104,947 | ..... | 588 | 193 | 781 | 294 | ..... | ..... | ..... |
| E. S. Stackhouse Coal Co., ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | 77,855 | 154 | 50 | 204 | ..... | ..... | 154 | ..... |
| Totals and averages, | 24 | 2 | 26 | 23 | 5 | 28 | 209,072 | 278,162 | 8,446 | 2,508 | 11,014 | 352 | 1,284 | 367 | 514 |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | | | 1 | | 1 | 1 | | 1 | | | | 1 | 4 | 16.67 |
| Falls of roof, | | | | | | | | | | | | | 7 | 29.16 |
| Mine cars, | 1 | | | | | | | | | | | 1 | 6 | 25.00 |
| Blasts, premature and otherwise, | 1 | | | | | 1 | | | | | | | 3 | 8.33 |
| Falling into chambers, | 1 | 1 | | | | | | | | | | | 3 | 8.33 |
| Crushed at batteries, | | | | | | | | | | 1 | | | 1 | 4.17 |
| Struck by rope, | | | | 1 | | | | | | | | | 1 | 4.17 |
| Struck by piece of rock, | | | | | | | | | | 1 | | | 1 | 4.17 |
| Totals, | 3 | 1 | 1 | 3 | 3 | 2 | | 1 | | 6 | 2 | 2 | 24 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | 1 | | | | | | | | | | | 1 | 2 | 100.00 |
| Totals, | 1 | | | | | | | | | | | 1 | 2 | 100.00 |
| Grand totals inside and outside, | 4 | 1 | 1 | 3 | 3 | 2 | | 1 | | 6 | 2 | 3 | 26 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | | | | | | 1 | 1 | | 1 | | | | 3 | 13.04 |
| Falls of slate, | | | | | | | | | | 1 | | | 1 | 4.35 |
| Falls of roof, | | | | | | | 1 | 1 | 1 | 1 | | | 4 | 17.39 |
| Mine cars, | 1 | 1 | | | | | | 1 | | | | | 4 | 17.39 |
| Explosions of powder and dynamite, | | | | 1 | | | | | | | | | 1 | 4.35 |
| Blasts, premature and otherwise, | | | | | | | | | 1 | 1 | 1 | | 3 | 13.04 |
| Falling, | 1 | | | | | | | | | | | | 1 | 4.35 |
| Struck by windlass, | 1 | | | | | | | | | | | | 1 | 4.35 |
| Struck by prop, | 1 | | | | | | | | | | | | 1 | 4.35 |
| Struck by piece of coal, | | | | | | 1 | | | | | | | 1 | 4.35 |
| Rush of coal, | | | | | | 1 | | | | | | | 1 | 4.35 |
| Struck by timber, | | | | | | | 1 | | | | | | 1 | 4.35 |
| Struck by rope, | | | | | | | 1 | | | | | | 1 | 4.34 |
| Totals, | 4 | 1 | | 2 | | 3 | 4 | 2 | 3 | 3 | 1 | | 23 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | 1 | | | | | | | | 1 | | | | 2 | 40.00 |
| Machinery, | | | | 1 | | | | | | | | | 1 | 20.00 |
| Struck by timber, | | | | | | 1 | | | | | | | 1 | 20.00 |
| Falling, | | 1 | | | | | | | | | | | 1 | 20.00 |
| Totals, | 1 | 1 | | 1 | | 1 | | | 1 | | | | 5 | 100.00 |
| Grand totals inside and outside, | 5 | 2 | | 3 | | 4 | 4 | 2 | 4 | 3 | 1 | | 28 | ..... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, | 12 | 1 | 1 | 1 | 12 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | 10 |
| Miners' laborers, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7 |
| Drivers and runners, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 |
| Doorboys and helpers, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 |
| Engineers, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 |
| Road cleaners, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 11 |
| Timbermen, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 |
| Totals, | 3 | 1 | 1 | 3 | 3 | 2 | 1 | 1 | 1 | 6 | 2 | 2 | 24 |
| Outside | | | | | | | | | | | | | |
| Runners, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Laborers, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Totals, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| Grand totals inside and outside, | 4 | 1 | 1 | 3 | 3 | 2 | 1 | 1 | 1 | 6 | 2 | 3 | 26 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-------|------|-------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, | | | | | | 2 | 1 | ..... | 2 | 2 | 1 | ..... | 8 |
| Miners' laborers, | 2 | 1 | | | | 1 | 3 | ..... | 1 | 1 |  | ..... | 9 |
| Drivers and runners, | | | | 1 |  |  |  | ..... |  |  |  | ..... | 1 |
| Doorboys and helpers, | | | | | | | | 1 | ..... |  |  | ..... | 1 |
| Company men, | 1 | ..... |  |  |  |  |  |  |  |  |  | ..... | 1 |
| Drillers, | 1 | | | 1 | | | | 1 | ..... |  |  | ..... | 1 |
| Loaders, ..... |  |  |  |  |  |  |  |  |  |  |  | ..... | 1 |
| Rockmen, ..... |  |  |  |  |  |  |  |  |  |  |  | ..... | 1 |
| Totals, | 4 | 1 | ..... | 2 | ..... | 3 | 4 | 2 | 3 | 3 | 1 | ..... | 23 |
| Outside | | | | | | | | | | | | | |
| Blacksmiths and carpenters,... | | | | | | 1 | ..... | ..... | ..... | ..... |  | ..... | 1 |
| Laborers, | 1 |  |  |  |  |  |  |  |  |  |  | ..... | 1 |
| Shaker-tenders, | | 1 |  |  |  |  |  |  |  |  |  | ..... | 1 |
| Fuelmen, | | | | 1 | | | | | 1 | 1 |  | ..... | 1 |
| Brakemen, | | | | | | | | | | 1 |  | ..... | 1 |
| Totals, | 1 | 1 | ..... | 1 | ..... | 1 | ..... |  | 1 | ..... |  | ..... | 5 |
| Grand totals inside and outside, | 5 | 2 | ..... | 3 | ..... | 4 | 4 | 2 | 4 | 3 | 1 | ..... | 28 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | |
|-------------------|--------|----------|----------|---------|-----------|--------|------|------|-----|-------|-------|----------|---------|
| | Totals | December | November | October | September | August | July | June | May | April | March | February | January |
| American, | 4 | 1 | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | 1 |
| Welsh, | 2 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Irish, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... |
| German, | 2 | ... | ... | 2 | ... | ... | ... | 1 | ... | ... | ... | ... | ... |
| Polish, | 2 | 1 | ... | 2 | ... | ... | 1 | ... | ... | ... | 1 | 1 | ... |
| Hungarian, | 11 | 1 | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... |
| Italian, | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... |
| Slavonian, | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lithuanian, | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Russian, | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | ... |
| Totals, | 26 | 3 | 2 | 6 | ... | 1 | ... | 2 | 3 | 3 | 1 | 1 | 4 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | |
|------------------|--------|----------|----------|---------|-----------|--------|------|------|-----|-------|-------|----------|---------|
| | Totals | December | November | October | September | August | July | June | May | April | March | February | January |
| American, | 5 | ... | ... | ... | ... | ... | ... | 3 | ... | ... | ... | 1 | 1 |
| English, | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... |
| Irish, | 1 | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | 1 | ... |
| Polish, | 13 | ... | ... | ... | 1 | 2 | 1 | 1 | ... | 1 | ... | ... | ... |
| Italian, | 3 | ... | ... | 2 | 1 | ... | 1 | ... | ... | ... | ... | 1 | ... |
| Slavonian, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... |
| Austrian, | 2 | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Russian, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... |
| Magyar, | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... |
| Totals, | 28 | 1 | 2 | 3 | 4 | 2 | 4 | 4 | ... | 3 | ... | 2 | 5 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|---|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|------------------|-----------------|----------------------------------|---|--|--|-----------------------------------|
| Delaware, Lackawanna and Western Railroad Co. | | | | | | | | | | | | | | | |
| Auchincloss Colliery: | | | | | | | | | | | | | | | |
| Number 1, | Shaft, | Gaseous, .. | Fan, | 25 | 8 | 8 | 70 | 2.6 | Guibal, | Steam, | 10 | 110,840 | 83,700 | 114,100 | 1,607 |
| Number 2, | Shaft, | Gaseous, .. | Fan, | 33 | 9.5 | 7 | 50 | 2.4 | Guibal, | Steam, | 8 | 132,900 | 123,400 | 163,200 | |
| Bliss Colliery: | | | | | | | | | | | | | | | |
| Bliss, | Shaft, | Gaseous, .. | { 3 Fans, { | 35 | 9.2 | 9.1 | 52 | 2 | Guibal, | Steam, | 31 | 326,000 | 275,500 | 354,800 | 789 |
| Espy, | Tunnel, .. | Gaseous, .. | { 3 Fans, { | { 24 | 4.3 | 10 | 72 | 1.6 | Guibal, | Steam, | | | | | |
| | | | | { 17 | 8 | 4 | 80 | 2.6 | Vulcan, | Steam, | | | | | |
| Tuesdale Colliery: | | | | | | | | | | | | | | | |
| Number 1, | Shaft, | | | 25 | 7 | 5 | 72 | 2.3 | Guibal, | Steam, | 15 | 203,000 | 175,000 | 243,000 | 434 |
| Number 2, | Shaft, | | | 25 | 7 | 6 | 75 | 2.7 | Guibal, | Steam, | 13 | 154,000 | 138,000 | 170,000 | 346 |
| Number 3, | Slope, | | | 26 | 7 | 5 | 105 | 3.2 | Vulcan, | Steam, | 10 | 159,600 | 135,400 | 242,500 | 358 |
| Number 5, | Slope, | | | 16 | 5 | 3 | 150 | 2.8 | Jeffrey, | Steam, | 13 | 140,000 | 135,000 | 156,000 | 285 |
| Number 6, | Slope, | | | 13 | 5 | 3 | 124 | 1 | Open running, .. | Electricity, .. | 4 | 38,200 | 30,200 | 66,900 | 166 |
| Tuesdale, | Tunnel, .. | | | 12 | 3.25 | 3 | 124 | 1 | Open running, .. | Electricity, .. | 4 | 38,200 | 30,200 | 66,900 | 166 |
| Number 20, | Tunnel, .. | | | 12 | 3.5 | 3.2 | 125 | .6 | Open running, .. | Electricity, .. | 9 | 66,800 | 55,100 | 70,500 | 152 |

*Emergency fan

| Susquehanna Coal Co. | | | | | | | | | | | | | | | |
|----------------------------------|--------------|-------------|---------------|-----|-----|-----|-----|-----|--------------|-----------------|----|---------|---------|---------|-----|
| Colliery No. 5. | | | | | | | | | | | | | | | |
| Number 2, | Shaft,..... | Gaseous,... | 3 Fans,... | 25 | 8 | 8 | 57 | 1.2 | Galbal,..... | Steam,..... | 8 | 136,624 | 98,490 | 142,000 | 395 |
| | | | | 25 | 8 | 8 | 70 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 70 | 2.2 | | | | | | | |
| | | | | 25 | 6 | 6 | 72 | 1.7 | | | | | | | |
| | | | | 25 | 8 | 8 | 60 | 1.8 | | | | | | | |
| | | | | 25 | 9.4 | 8 | 90 | 1.8 | | | | | | | |
| | | | | 15 | 4 | 4 | 68 | 1.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| Number 4, | Slope,..... | Gaseous,... | 4 Fans,... | 25 | 8 | 8 | 60 | 1.8 | Galbal,..... | Steam,..... | 9 | 115,380 | 90,000 | 122,000 | 320 |
| | | | | 15 | 4 | 4 | 68 | 1.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| Number 1, | Slope,..... | Gaseous,... | Fan,..... | 25 | 8 | 8 | 74 | 2.1 | Galbal,..... | Steam,..... | 2 | 8,000 | 7,000 | 9,000 | 75 |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| Number 2, | Drift,..... | Non-gas,... | Natural,..... | 25 | 8 | 8 | 74 | 2.1 | Galbal,..... | Steam,..... | 2 | 8,000 | 7,000 | 9,000 | 75 |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| Number 4, | Shaft,..... | Gaseous,... | Fan,..... | 20 | 6 | 6 | 70 | 1 | Galbal,..... | Steam,..... | 10 | 115,000 | 103,000 | 118,000 | 227 |
| | | | | 8 | 3.5 | 1.5 | 80 | 1 | | | | | | | |
| | | | | 8 | 3.5 | 1.5 | 80 | 1 | | | | | | | |
| | | | | 8 | 3.5 | 1.5 | 80 | 1 | | | | | | | |
| | | | | 8 | 3.5 | 1.5 | 80 | 1 | | | | | | | |
| | | | | 8 | 3.5 | 1.5 | 80 | 1 | | | | | | | |
| | | | | 8 | 3.5 | 1.5 | 80 | 1 | | | | | | | |
| | | | | 8 | 3.5 | 1.5 | 80 | 1 | | | | | | | |
| Number 1, | Drift,..... | Non-gas,... | Natural,..... | 25 | 8 | 8 | 74 | 2.1 | Galbal,..... | Steam,..... | 2 | 8,000 | 7,000 | 9,000 | 75 |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| | | | | 25 | 8 | 8 | 74 | 2.1 | | | | | | | |
| Number 2, | Tunnel,..... | Gaseous,... | Fan,..... | 20 | 6 | 6 | 58 | 1.7 | Galbal,..... | Steam,..... | 6 | 91,600 | 82,000 | 94,000 | 220 |
| | | | | 25 | 8 | 8 | 46 | 1.2 | | | | | | | |
| | | | | 25 | 8 | 8 | 46 | 1.2 | | | | | | | |
| | | | | 25 | 8 | 8 | 46 | 1.2 | | | | | | | |
| | | | | 25 | 8 | 8 | 46 | 1.2 | | | | | | | |
| | | | | 25 | 8 | 8 | 46 | 1.2 | | | | | | | |
| | | | | 25 | 8 | 8 | 46 | 1.2 | | | | | | | |
| | | | | 25 | 8 | 8 | 46 | 1.2 | | | | | | | |
| Number 6, | Shaft,..... | Gaseous,... | 3 Fans,... | 20 | 6 | 6 | 70 | 1.9 | Galbal,..... | Steam,..... | 5 | 190,000 | 50,000 | 193,000 | 214 |
| | | | | 10 | 5 | 1.9 | 150 | 1.8 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| Number 7, | Slope,..... | Gaseous,... | Fan,..... | 10 | 5 | 1.9 | 120 | 1.2 | Galbal,..... | Steam,..... | 5 | 190,000 | 50,000 | 193,000 | 214 |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| Number 10, | Slope,..... | Gaseous,... | Fan,..... | 10 | 5 | 1.9 | 120 | 1.2 | Galbal,..... | Steam,..... | 5 | 190,000 | 50,000 | 193,000 | 214 |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| | | | | 10 | 5 | 1.9 | 120 | 1.2 | | | | | | | |
| Number 1, | Drift,..... | Gaseous,... | Fan,..... | 7.5 | 4 | 1.3 | 175 | 1.5 | Galbal,..... | Steam,..... | 6 | 91,600 | 82,000 | 94,000 | 220 |
| | | | | 20 | 6 | 6 | 58 | 1.7 | | | | | | | |
| | | | | 20 | 6 | 6 | 58 | 1.7 | | | | | | | |
| | | | | 20 | 6 | 6 | 58 | 1.7 | | | | | | | |
| | | | | 20 | 6 | 6 | 58 | 1.7 | | | | | | | |
| | | | | 20 | 6 | 6 | 58 | 1.7 | | | | | | | |
| | | | | 20 | 6 | 6 | 58 | 1.7 | | | | | | | |
| | | | | 20 | 6 | 6 | 58 | 1.7 | | | | | | | |
| Colliery No. 7: | Shaft,..... | Gaseous,... | 2 Fans,... | 25 | 8 | 8 | 78 | 3.8 | Galbal,..... | Steam,..... | 5 | 150,000 | 135,000 | 158,000 | 267 |
| | | | | 25 | 8 | 8 | 78 | 3.8 | | | | | | | |
| | | | | 25 | 8 | 8 | 78 | 3.8 | | | | | | | |
| | | | | 25 | 8 | 8 | 78 | 3.8 | | | | | | | |
| | | | | 25 | 8 | 8 | 78 | 3.8 | | | | | | | |
| | | | | 25 | 8 | 8 | 78 | 3.8 | | | | | | | |
| | | | | 25 | 8 | 8 | 78 | 3.8 | | | | | | | |
| | | | | 25 | 8 | 8 | 78 | 3.8 | | | | | | | |
| Number 1, North, | Shaft,..... | Gaseous,... | 5 Fans,... | 20 | 8 | 6 | 72 | 1.5 | Galbal,..... | Steam,..... | 5 | 100,000 | 90,000 | 108,000 | 252 |
| | | | | 20 | 8 | 6 | 72 | 1.5 | | | | | | | |
| | | | | 20 | 8 | 6 | 72 | 1.5 | | | | | | | |
| | | | | 20 | 8 | 6 | 72 | 1.5 | | | | | | | |
| | | | | 20 | 8 | 6 | 72 | 1.5 | | | | | | | |
| | | | | 20 | 8 | 6 | 72 | 1.5 | | | | | | | |
| | | | | 20 | 8 | 6 | 72 | 1.5 | | | | | | | |
| | | | | 20 | 8 | 6 | 72 | 1.5 | | | | | | | |
| Number 1, North, | Shaft,..... | Gaseous,... | 5 Fans,... | 10 | 2.5 | 2.5 | 180 | 2.3 | Galbal,..... | Electricity,... | 2 | 70,000 | 60,000 | 75,000 | 105 |
| | | | | 15 | 4 | 4 | 76 | .9 | | | | | | | |
| | | | | 15 | 4 | 4 | 76 | .9 | | | | | | | |
| | | | | 15 | 4 | 4 | 76 | .9 | | | | | | | |
| | | | | 15 | 4 | 4 | 76 | .9 | | | | | | | |
| | | | | 15 | 4 | 4 | 76 | .9 | | | | | | | |
| | | | | 15 | 4 | 4 | 76 | .9 | | | | | | | |
| | | | | 15 | 4 | 4 | 76 | .9 | | | | | | | |
| West End Coal Co. | Drift,..... | Gaseous,... | Fan,..... | 16 | 4.5 | 4.6 | 100 | 1.5 | Galbal,..... | Steam,..... | 4 | 65,400 | 52,040 | 88,500 | 130 |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| West End Colliery: | Drift,..... | Gaseous,... | Fan,..... | 16 | 4.5 | 4.6 | 100 | 1.5 | Galbal,..... | Steam,..... | 4 | 65,400 | 52,040 | 88,500 | 130 |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| | | | | 4 | 1.6 | 1.6 | 450 | .5 | | | | | | | |
| Lehigh and Wilkes-Barre Coal Co. | Slope,..... | Gaseous,... | Fan,..... | 24 | 8 | 6 | 70 | 1.7 | Galbal,..... | Steam,..... | 12 | 120,000 | 114,000 | 126,000 | 313 |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| Wanamie Colliery: | Drift,..... | Gaseous,... | Fan,..... | 24 | 8 | 6 | 70 | 1.7 | Galbal,..... | Steam,..... | 12 | 120,000 | 114,000 | 126,000 | 313 |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| Number 2, | Drift,..... | Gaseous,... | Fan,..... | 24 | 8 | 6 | 70 | 1.7 | Galbal,..... | Steam,..... | 12 | 120,000 | 114,000 | 126,000 | 313 |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| Number 3, | Slope,..... | Gaseous,... | Fan,..... | 24 | 8 | 6 | 70 | 1.7 | Galbal,..... | Steam,..... | 12 | 120,000 | 114,000 | 126,000 | 313 |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| Number 3, | Drift,..... | Gaseous,... | Fan,..... | 24 | 8 | 6 | 70 | 1.7 | Galbal,..... | Steam,..... | 12 | 120,000 | 114,000 | 126,000 | 313 |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| Number 3, | Drift,..... | Gaseous,... | Fan,..... | 24 | 8 | 6 | 70 | 1.7 | Galbal,..... | Steam,..... | 12 | 120,000 | 114,000 | 126,000 | 313 |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| Number 3, | Drift,..... | Gaseous,... | Fan,..... | 24 | 8 | 6 | 70 | 1.7 | Galbal,..... | Steam,..... | 12 | 120,000 | 114,000 | 126,000 | 313 |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| Number 3, | Drift,..... | Gaseous,... | Fan,..... | 24 | 8 | 6 | 70 | 1.7 | Galbal,..... | Steam,..... | 12 | 120,000 | 114,000 | 126,000 | 313 |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| Number 3, | Drift,..... | Gaseous,... | Fan,..... | 24 | 8 | 6 | 70 | 1.7 | Galbal,..... | Steam,..... | 12 | 120,000 | 114,000 | 126,000 | 313 |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| Number 3, | Drift,..... | Gaseous,... | Fan,..... | 24 | 8 | 6 | 70 | 1.7 | Galbal,..... | Steam,..... | 12 | 120,000 | 114,000 | 126,000 | 313 |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| Number 3, | Drift,..... | Gaseous,... | Fan,..... | 24 | 8 | 6 | 70 | 1.7 | Galbal,..... | Steam,..... | 12 | 120,000 | 114,000 | 126,000 | 313 |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| Number 3, | Drift,..... | Gaseous,... | Fan,..... | 24 | 8 | 6 | 70 | 1.7 | Galbal,..... | Steam,..... | 12 | 120,000 | 114,000 | 126,000 | 313 |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | 6 | 70 | 1.8 | | | | | | | |
| | | | | 24 | 8 | | | | | | | | | | |

than ventilates more than one opening.

TABLE I.—Continued

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|--|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|---------------|-----------------|----------------------------------|---|--|--|-----------------------------------|
| | | | | | | | | | | | | | | | |
| Alden Coal Co. Number 1, Ridgewood, New, Number 2, Baltimore, | Shaft, ... } | Gaseous, .. | Fan, | 15 | 5 | 4.7 | 84 | .2 | Guibal, | Steam, ... } | 4 | 46,700 | 40,200 | 46,800 | 68 |
| | Slope, ... } | Gaseous, .. | 2 Fans, ... } | 24 | 8 | 7 | 66 | 1.5 | Guibal, | Steam, | 1 | 110,980 | 104,350 | 123,570 | 92 |
| | Shaft, | Non-gas, .. | Fan, | 24 | 9 | 5.9 | 36 | .2 | Guibal, | Steam, | 4 | 109,900 | 94,200 | 102,800 | 24 |
| | Slope, | Non-gas, .. | Fan, | 15 | 3 | 4.7 | 40 | .1 | Guibal, | Steam, | 1 | 12,300 | 11,000 | 13,650 | 56 |
| El. S. Stackhouse Coal Co. Salem Colliery: Number 4, Number 3, Number 1, Number 2, Beadle, † Red Ash, † Crory, † | Drift, | Non-gas, .. | Natural, .. | ... | ... | ... | ... | ... | Stine, | Electricity, .. | 1 | 5,000 | 3,000 | 5,000 | 8 |
| | Drift, | Non-gas, .. | Fan, | 4 | 2 | 1.5 | 320 | 1.7 | Stine, | Electricity, .. | 1 | 15,000 | 12,000 | 15,500 | 66 |
| | Tunnel, .. | Non-gas, .. | Natural, .. | ... | ... | ... | ... | ... | Stine, | Electricity, .. | 1 | 3,000 | 2,000 | 3,100 | 6 |
| | Tunnel, .. | Non-gas, .. | Fan, | 5 | 2.5 | 1.9 | 450 | 1.8 | Stine, | Electricity, .. | 1 | 23,000 | 12,000 | 25,000 | 34 |
| | Drift, | Non-gas, .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | Drift, | Non-gas, .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |

† Abandoned.

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|---|------------------|--|------------------------|-------------------------------------|-----------------------|---------------------------------|
| Delaware, Lackawanna and Western Railroad Co. | | | | | | |
| Anchincloss, } | Luzerne, } | C. E. Tobey, } | Scranton, } | H. G. Davis, } | Kingston, } | D., L. and W. |
| Bliss, } | | | | | | |
| Truesdale, } | | | | | | |
| Susquehanna Coal Co. | Luzerne, } | Robert A. Quin, } | Wilkes-Barre, } | Francis H. Kohlbra- ker, } | Nanticoke, } | Pennsylvania |
| Numbers 5, 6, 7, } | | | | | | |
| Nanticoke Washery, } | | | | | | |
| West End Coal Co. | Luzerne, } | H. A. Fillmore, } | Mocanaqua, } | | | Penna. and C. R. R. of N. J. |
| Lehigh and Wilkes-Barre Coal Co. | Luzerne, } | C. F. Huber, Gen- eral Manager, } | Wilkes-Barre, } | E. J. Newbaker, } | Wilkes-Barre, } | C. R. R. of N. J. |
| Wanamie, } | | | | | | |
| Alden Coal Co. | Luzerne, } | K. M. Smith, } | Alden Station, } | | | C. R. R. of N. J. |
| E. S. Stackhouse Coal Co. | Luzerne, } | E. S. Stackhouse, } | Shickshinny, } | | | D., L. and W. |
| Aldem, } | | | | | | |

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|---|---------------------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Delaware, Lackawanna and Western Railroad Co. | | | | | | | | | | | | | |
| Anchincloss, | { Luzerne, .. } | 264,190 | 29,112 | 9,130 | 297,432 | 230 | 777 | 3 | 1 | 55,725 | 14,000 | 123,075 | 30 |
| Bliss, | { Luzerne, .. } | 443,823 | 27,001 | 3,716 | 477,440 | 216 | 935 | 2 | ..... | 26,856 | 33,122 | 123,075 | 57 |
| Truesdale, | { Luzerne, .. } | 1,130,800 | 35,030 | 3,418 | 1,169,248 | 240 | 2,125 | 1 | ..... | 927,650 | 83,861 | 137,615 | 38 |
| Totals, | | 1,843,813 | 82,243 | 14,264 | 1,940,320 | ..... | 3,797 | 6 | 2 | 1,273,475 | 119,747 | 293,800 | 125 |
| Susquehanna Coal Co. | | | | | | | | | | | | | |
| Number 5, | { Luzerne, .. } | 375,655 | 73,768 | 11,869 | 461,292 | 217 | 1,508 | 2 | 4 | 368,125 | 33,122 | 12,100 | 121 |
| Number 6, | { Luzerne, .. } | 463,096 | 52,717 | 5,065 | 520,908 | 215 | 1,213 | 4 | 4 | 328,550 | 55,487 | 5,450 | 70 |
| Number 7, | { Luzerne, .. } | 342,500 | 69,655 | 9,151 | 421,306 | 155 | 1,283 | 3 | 3 | 151,000 | 17,701 | 96,450 | 114 |
| Nanticoke Washery, | Luzerne, | 1,181,251 | 196,140 | 26,115 | 1,403,506 | ..... | 4,064 | 9 | 11 | 847,675 | 106,310 | 114,000 | 305 |
| Totals, | | 1,856,415 | 2,188 | 33 | 187,636 | 500 | 73 | ..... | ..... | ..... | ..... | ..... | ..... |
| West End, | Luzerne, | 1,366,666 | 198,228 | 26,118 | 1,591,142 | ..... | 4,137 | 9 | 11 | 847,675 | 106,310 | 114,000 | 305 |
| West End Coal Co. | | | | | | | | | | | | | |
| Lehigh and Wilkes-Barre Coal Co. | Luzerne, | 493,834 | 75,000 | 9,397 | 578,231 | 250 | 1,202 | 5 | 8 | 124,500 | 78,748 | 140,700 | 34 |
| Wanamie, | Luzerne, | 471,630 | 25,212 | 3,465 | 500,307 | 212 | 893 | 4 | 6 | 328,500 | 19,103 | 30,840 | 112 |
| Alden, | Alden Coal Co. | 284,169 | 35,830 | 9,895 | 329,894 | 213 | 781 | 2 | ..... | 165,725 | 11,325 | 52,900 | 68 |
| Salem, | E. S. Stackhouse Coal Co. | 75,113 | 1,271 | 1,451 | 77,835 | 201 | 204 | ..... | 1 | 65,050 | 10,066 | 1,880 | 2 |
| Grand totals, | | 4,535,225 | 417,884 | 64,620 | 5,017,729 | ..... | 11,014 | 26 | 28 | 2,804,925 | 345,299 | 634,130 | 646 |

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | Locomotives | | | | Total horse power | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors | |
|--|----------|-------------------|-------------|---------|-------------|-------------------|----------|-------|-------|-------------------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|----------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Air | | | | | | | | | Electric |
| Delaware, Lackawanna and Western Railroad Co., | Luzerne, | 6 | 150 | 13 | 5,318 | 5,318 | ..... | 2 | ..... | 54 | 11,230 | 58 | 11,230 | 10 | 7,780 | 6,380 | 8 | 7 |
| Susquehanna Coal Co., |  | ..... | ..... | 55 | 11,554 | 11,704 | ..... | 19 | 12 | 11 | 13,430 | 93 | 13,430 | 10 | 9,000 | 4,948 | 7 | 10 |
| West End Coal Co., |  | ..... | ..... | 10 | 3,300 | 3,300 | ..... | 8 | ..... | 16 | 2,440 | 28 | 2,440 | 8 | 4,700 | 4,343 | 5 | 4 |
| Lehigh and Wilkes-Barre Coal Co., |  | ..... | ..... | 10 | 1,666 | 1,666 | ..... | 2 | ..... | ..... | ..... | 44 | 3,204 | 3 | 1,992 | 1,582 | ..... | 6 |
| Alden Coal Co., |  | ..... | ..... | 11 | 2,262 | 2,262 | ..... | 2 | ..... | ..... | ..... | 9 | 1,375 | ..... | 1,800 | 1,000 | ..... | 1 |
| E. S. Stackhouse Coal Co., |  | ..... | ..... | 1 | 150 | 150 | ..... | ..... | ..... | 4 | ..... | ..... | ..... | ..... | 332 | 300 | ..... | 1 |
| Totals, | ..... | 6 | 150 | 100 | 24,250 | 24,400 | 2 | 34 | 12 | 85 | 31,729 | 232 | 31,729 | 36 | 28,037 | 18,210 | 22 | 23 |

TABLE 3.—Number of each class of employees inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | | Outside | | | | | | | | | | | Grand total |
|--|----------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|---------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|---------------------|---------------|--------|--|-------------|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employees | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | Bookkeepers and clerks | All other employees | Total outside | | | |
| Delaware, Lackawanna and Western Railroad Co., | Luzerne, | 6 | 7 | 32 | 1,128 | 1,900 | 95 | 61 | 17 | 665 | ... | 3,214 | ... | 4 | 44 | 57 | 127 | 8 | 11 | 322 | 583 | 3,797 | | |
| Susquehanna Coal Co., | | 6 | 9 | 39 | 917 | 1,519 | 248 | 61 | 18 | 80 | 573 | 2,867 | 1 | 6 | 96 | 177 | 161 | 39 | 17 | 774 | 1,274 | 4,137 | | |
| West End Coal Co., | | 4 | 5 | 5 | 342 | 349 | 44 | 11 | 12 | 152 | ... | 924 | 1 | 2 | 29 | 27 | 35 | 12 | 6 | 167 | 278 | 1,202 | | |
| Lehigh and Wilkes-Barre Coal Co., | | 1 | 2 | 14 | 314 | 190 | 55 | 29 | 5 | 91 | ... | 701 | ... | 1 | 7 | 23 | 45 | 5 | 4 | 105 | 190 | 893 | | |
| Alden Coal Co., | | 1 | 1 | 7 | 215 | 146 | 107 | 17 | 5 | ... | 80 | 588 | ... | 1 | 12 | 57 | 35 | 26 | 8 | 73 | 191 | 781 | | |
| E. S. Stackhouse Coal Co., | | 1 | 1 | ... | 62 | 70 | 10 | 1 | ... | 3 | 6 | 154 | 1 | 1 | 3 | 3 | 10 | 3 | 3 | 26 | 50 | 204 | | |
| Totals, | ... | 19 | 25 | 97 | 2,978 | 2,867 | 559 | 187 | 57 | 993 | 668 | 8,446 | 4 | 15 | 191 | 324 | 416 | 93 | 48 | 1,477 | 2,568 | 11,014 | | |

TABLE 3.—Part 2

| Names of Operators | County | Average Number of Days Worked Monthly | | | | | | | | | | | |
|---|----------|---------------------------------------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | | January | February | March | April | May | June | July | August | September | October | November | December |
| Totals | | 232 | 231 | 232 | 231 | 232 | 231 | 232 | 231 | 232 | 231 | 232 | 231 |
| Delaware, Lackawanna and Western Railroad Co., | Luzerne, | 16 | 14 | 15 | 22 | 20 | 22 | 13 | 22 | 22 | 22 | 23 | 21 |
| Susquehanna Coal Co., | | 12 | 11 | 18 | 23 | 22 | 18 | 13 | 15 | 15 | 22 | 23 | 21 |
| West End Coal Co., | | 24 | 18 | 20 | 22 | 20 | 16 | 18 | 22 | 22 | 23 | 23 | 21 |
| Lehigh and Wilkes-Barre Coal Co., | | 17 | 14 | 15 | 22 | 21 | 14 | 12 | 22 | 16 | 24 | 22 | 23 |
| Alden Coal Co., | | 18 | 15 | 16 | 17 | 18 | 17 | 16 | 15 | 19 | 20 | 22 | 20 |
| E. S. Stackhouse Coal Co., | | 19 | 18 | 25 | 27 | 6 | 12 | 12 | 12 | 12 | 16 | 23 | 24 |
| | | | | | | | | | | | | | |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|-------|----------------------------|-----------------|-----------------|-----|-------------------|------------------|-------------------|--------------------|----------|---|
| Jan. | 5 Ignatz Bruzok, | Polish, | Laborer, | 35 | M. | 1 | 2 | Number 6, | Luzerne, | Killed by car at foot of run while on his way out of the mine. |
| | 16 Roman Genette, | Italian, | Miner, | 24 | M. | 1 | 2 | West End, | | Killed by blast at face of chamber. |
| | 18 John Dougherty, | Irish, | Runner, | 20 | M. | ... | ... | Number 5, | | Fatally squeezed between cars. Outside. |
| | 26 Philip Swanberry, | American, | Miner, | 33 | M. | 1 | 1 | Wanamie, | | Killed by falling down his chamber, pitch 60 degrees. |
| Feb. | 5 Anthony Drongoski, .. | Polish, | Laborer, | 24 | S. | ... | ... | West End, | | Fatally injured by falling down his chamber. |
| March | 22 Frank Pavoski, | Polish, | Miner, | 34 | W. | ... | 5 | Wanamie, | | Fatally injured by fall of coal while skipping pillar. |
| | Charles Fassetti, | Italian, | Laborer, | 24 | M. | 1 | ... | West End, | | Fatally injured by being struck by derailed car along chamber road. |
| April | 15 Vasel Pyron, | Russian, .. | Driver, | 22 | S. | ... | ... | Aldea, | | Killed by car. While riding up a plane he was jumped off track, the chain then broke and the car ran back and struck Pyron. |
| | Rich. Herman, | American, .. | Engineer, | 25 | M. | 1 | 3 | Number 5, | | Fatally injured. While hanging a slope rope on roof hooks at head of slope, a mule hitched to the end of the rope at the bottom of the slope jerked the rope out of his hands, and the rope struck him on the head. |
| May | 8 Mike Horesdok, | Polish, | Laborer, | 26 | S. | ... | ... | Bliss, | | Killed by fall of coal at working face. |
| | 19 Anthony Venarick, | Polish, | Laborer, | 29 | M. | 1 | 6 | Number 6, | | Killed by fall of rock at face of chamber. |
| | 26 Victor Zalmerovich, .. | Polish, | Miner, | 26 | M. | 1 | 1 | Number 6, | | Killed by fall of coal at face of pitch chamber. |
| June | 5 Frank Simon, | Hungarian, .. | Miner, | 47 | M. | 1 | 1 | Number 6, | Luzerne, | Killed by premature blast at face of chamber. |
| | 8 William Garlovich, ... | Polish, | Miner, | 30 | M. | 1 | 1 | West End, | | Fatally injured by fall of rock while standing prop at face of chamber. |
| | John Agnew, | American, ... | Laborer, | 33 | M. | 1 | ... | Aldea, | | Fatally injured by fall of coal at face of chamber. |
| Aug. | 5 Frank Kavalski, | Polish, | Timberman, ... | 29 | M. | 1 | 1 | Auchincloss, | | { Killed by fall of rock while removing a set of timber. |
| Oct. | Edward Vaughn, | Welsh, | Timberman, ... | 54 | S. | ... | ... | { | | Fatally crushed between loose coal and battery logging at face of chamber. |
| | Charles Wise, | German, ... | Miner, | 52 | M. | 1 | 3 | Wanamie, | | |

| | | | | | | | | |
|---------|-------------------------|----------------|------------------|----|----|---|--------------------|--|
| Oct. 12 | Steve Petro, | Slavonian, .. | Miner, | 32 | M. | 1 | Number 7, | Killed by being struck by piece of rock that |
| 16 | Adam Taginski, | Polish, | Road-cleaner, .. | 61 | M. | 1 | Wanamie, | fell from kob at working face. |
| 20 | Joseph Smith, | German, | Miner, | 51 | M. | 1 | Number 7, | Killed by being squeezed between car and |
| Nov. 16 | Dominick Butcavage, .. | Polish, | Miner, | 36 | M. | 1 | Bliss, | rib along main road, derailed car and |
| 22 | William Phillips, | Welsh, | Timberman, .. | 48 | W. | 1 | Archincloss, | Fatally crushed between car and |
| Dec. 3 | Mike Kabilie, | Lithuanian, .. | Doortender, .. | 63 | W. | 4 | Truesdale, | timber leg at face of chamber. |
| 14 | Frank Sundae, | Polish, | Laborer, | 24 | M. | 1 | Number 7, | Fatally injured by fall of rock at face of |
| 31 | George W. Titus, | American, .. | Laborer, | 70 | S. | 1 | West End, | chamber. |
| | | | | | | | | Fatally injured by fall of rock while clean- |
| | | | | | | | | ing a fall on slope. |
| | | | | | | | | Fatally injured by cars while they were |
| | | | | | | | | running through his door. |
| | | | | | | | | Killed by fall of rock at face of chamber. |
| | | | | | | | | Fatally squeezed between derailed car and |
| | | | | | | | | side of breaker. Outside. |

} Luzerne.

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|------------------------|----------------|---------------------|-----|-------------------|--------------------|----------|--|
| Jan. 4 | Dennis McCue, | Irish, | Company man, ... | 66 | M. | Number 7, | ... | Rib fractured by falling when a board that he was carrying was struck by motor. |
| 8 | Chester Plashinski, .. | Polish, | Laborer, | 23 | S. | Number 6, | ... | Thigh fractured by runaway car in slope. |
| 12 | Christopher Krautz, .. | American, ... | Driller, | 35 | S. | Wanamie, | ... | Arm fractured. Struck by windlass while putting rods down a bore hole. |
| | Joseph Traincheck, ... | Polish, | Laborer, | 21 | S. | Number 7, | ... | Arm fractured. Squeezed between cars. Outside. |
| 29 | Santa Modesta, | Italian, | Laborer, | 26 | M. | West End, | ... | Collar bone broken by prop falling on him while loading car on gangway road. |
| Feb. 5 | Charles Wapinski, | Polish, | Laborer, | 19 | S. | West End, | ... | Leg fractured. Squeezed between cars on chamber road. |
| 11 | Frank Olschfski, | American, .. | Shaker-tender, | 15 | S. | Number 6, | ... | Back injured and internally injured by fall in chamber. |
| April 7 | Mike Challick, | Russian, ... | Loader, | 23 | M. | Truesdale, | ... | Hands shattered and sight of eyes destroyed by explosion of a box of caps. |
| 20 | Victor Hillen, | Slavonian, .. | Runner, | 18 | S. | Number 6, | ... | Leg fractured. Squeezed between derailed cars. |
| 28 | Wadick Corolls, | Polish, | Fuelman, | 37 | M. | Wanamie, | Lucerne. | Head, arm and body bruised by conveyor line. Outside. |
| June 3 | J. P. Adleman, | American, ... | Carpenter, | 42 | M. | West End, | ... | Arm broken and head cut by falling timber while tearing down an old pocket. Outside. |
| 12 | Joseph Gonglanski, ... | Polish, | Miner, | 34 | M. | Auchincloss, | ... | Head cut by fall of coal at face of chamber. |
| 22 | Alfred Miller, | American, ... | Miner, | 39 | M. | Wanamie, | ... | Compound fracture of wrist. Struck by coal that fell about 10 feet. |
| 24 | Wash Cragle, | American, ... | Laborer, | 47 | S. | West End, | ... | Eye sight destroyed by rush of coal in chamber chute. |
| July 9 | Frank Sershen, | Polish, | Laborer, | 23 | S. | Wanamie, | ... | Collar bone fractured by timber falling on him at face of chamber. |
| | Paul Kataco, | Hungarian, ... | Laborer, | 33 | M. | West End, | ... | Leg broken by fall of rock while shoveling coal in chute. |
| 19 | John Demorra, | Italian, | Laborer, | 22 | S. | West End, | ... | Leg broken. Struck by rope while crossing slope. |
| 22 | Cyril Kostloski, | Polish, | Miner, | 27 | M. | West End, | ... | Back injured by fall of coal while trimming after blast. |

| | | | | | | | | |
|-------|----|-----------------------|----------------|-----------------|----|----|-----------------|--|
| Aug. | 23 | Anthony Boyer, | Polish, | Rockman, | 32 | M. | Wanamie, | Leg broken by fall of rock at face of tunnel. Body squeezed between car and rib on gangway. Forearm injured by fall of coal from rib while working in chamber. Skull fractured by fall of rock in chamber. Wrist fractured and face and body bruised by delayed blast. Internally injured by falling under locomotive. Outside, Spine fractured by fall of slate at face of chamber. Skull and legs fractured and otherwise injured by premature blast. Leg fractured and hip dislocated by fall of rock at face of chamber. Leg fractured by flying coal from blast. |
| | 24 | Mike Zacher, | Polish, | Patcher, | 18 | S. | Wanamie, | |
| Sept. | 3 | Louis Pussette, | Italian, | Miner, | 29 | M. | West End, | |
| | 14 | Paul Lechieski, | Polish, | Laborer, | 30 | S. | Salem, | |
| | 22 | Andrew Machoga, | Austrian, .. | Miner, | 26 | M. | Number 7, | |
| | 27 | Herbert Beese, | English, ... | Brakeman, | 17 | S. | Number 5, | |
| Oct. | 7 | John Lowandlick, | Polish, | Miner, | 26 | M. | Number 5, | |
| | 8 | Mike Slust, | Polish, | Miner, | 45 | S. | Number 5, | |
| | 26 | Andrew Danko, | Austrian, .. | Laborer, | 45 | M. | Number 6, | |
| Nov. | 24 | Walter Koschinski, .. | Polish, | Miner, | 40 | M. | Number 5, | |

Luzerne,

CONDITION OF COLLIERIES

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Auchincloss Colliery.—Ventilation, drainage and condition as to safety, good.

Bliss and Truesdale Collieries.—Ventilation and condition as to safety, good. Drainage, fair.

SUSQUEHANNA COAL COMPANY

Nos. 5 and 6 Collieries.—Ventilation and drainage, fair. Condition as to safety, good.

No. 7 Colliery.—Ventilation fair. Drainage and condition as to safety, good.

WEST END COAL COMPANY

West End Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

LEHIGH AND WILKES-BARRE COAL COMPANY

Wanamie Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

ALDEN COAL COMPANY

Alden Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

E. S. STACKHOUSE COAL COMPANY

Salem Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

IMPROVEMENTS

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Auchincloss Colliery.—The work of replacing timber in No. 1 shaft with re-enforced concrete is still underway. The replacing of timber sets with steel along the main haulage road, from the end of the concrete walls in No. 1 shaft, Baltimore vein, has been pushed during the year with satisfaction. Several wood sets of timber supports have been removed, eliminating the fire risk. Several rock tunnels have been driven for developing ventilation and other purposes.

Bliss Colliery.—A small air shaft, extending from the surface to the Mills seam and used as a second opening, is being recribbed with concrete wall.

Truesdale Colliery.—The work of reconstructing this entire breaker with steel is underway, and the east side of same will be completed during the year 1916. For developing, transportation and ventilation, 18 rock tunnels of various lengths, have been driven from seam to seam.

LEHIGH AND WILKES-BARRE COAL COMPANY

Wanamie Colliery.—No. 36 tunnel extended from the Baltimore No. 12 tunnel extended from the Hillman seam. No. 38 tunnel driven from Ross to Ross. No. 40 tunnel driven from Red Ash to Red Ash. No. 39 tunnel driven from Hillman to Kidney.

ALDEN COAL COMPANY

Alden Colliery.—A tunnel 410 feet long has been driven from the Red Ash to the Ross vein in No. 2 shaft workings. One 10 inch by 14 inch Vulcan hoist has been installed on Red Ash slope. A Chambersburg steam hammer and a Wiley and Russell bolt machine have been added to the shop equipment.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in the Susquehanna Coal Company Building, Nanticoke, May 18 and 19. The Board of Examiners was composed of Joseph J. Walsh, Mine Inspector; F. H. Kohlbraker, Superintendent; John Keating and Albon Gonsoski, Miners.

The following persons passed a satisfactory examination and were granted certificates:

MINE FOREMEN

Thomas J. Arnott, Daniel P. Bolton, John W. Jones and Mark Lloyd, Nanticoke; Martin Burns, Evan T. Jones, Charles R. Price, Glen Lyon; George Hutchinson, William L. James, Concrete City; Edward Dearing, Kingston; Thomas Fenton, Dorranceton; Lewis Keating, Edwardsville; Thomas Murphy, Wanamie.

ASSISTANT MINE FOREMEN

Daniel Blackwell, John Clark, John T. Davies, Joseph Hocken, James H. Jenkins, Daniel Jones, Reese Jones, Thomas Klugo, Thomas X. Palmer, Louis Ramlow, Thomas H. Roberts, William H. Ruck, George Ruck, John H. Thomas, Jr., Charles B. Trenery, Henry L. Watkins, Nanticoke; James Connor, Larkesville; David Jones, Concrete City; John E. Richards, Warrior Run; Martin Zawatzki, Glen Lyon.



ELEVENTH DISTRICT

LUZERNE AND CARBON COUNTIES

Hazleton, Pa., February 19, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Eleventh Anthracite District, for the year ending December 31, 1915.

Respectfully submitted,

DAVID J. RODERICK,
Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 21 |
| Number of mines, | 83 |
| Number of mines in operation, | 81 |
| Number of tons of coal shipped to market, | 5,192,629 |
| Number of tons used at mines for steam and heat, | 712,308 |
| Number of tons sold to local trade and used by employees, | 226,991 |
| Number of tons produced, | 6,131,928 |
| Number of tons produced by compressed air machines, ..... | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 7,595 |
| Number of persons employed outside, | 3,948 |
| Number of fatal accidents inside of mines, | 22 |
| Number of fatal accidents outside, | 6 |
| Number of non-fatal accidents inside of mines, | 36 |
| Number of non-fatal accidents outside, | 18 |
| Number of tons of coal produced per fatal accident inside, | 278,724 |
| Number of tons produced per fatal accident outside, .. | 1,021,988 |
| Number of tons produced per fatal accident inside and outside, | 218,997 |
| Number of persons employed per fatal accident inside, .. | 345 |
| Number of persons employed per fatal accident outside, .. | 658 |
| Number of persons employed per fatal accident inside and outside, | 412 |
| Number of persons employed per non-fatal accident inside, | 211 |
| Number of persons employed per non-fatal accident outside, | 219 |
| Number of persons employed per non-fatal accident inside and outside, | 214 |
| Number of wives made widows, | 20 |
| Number of children made orphans, | 29 |
| Number of steam locomotives used inside of mines, ... | 12 |
| Number of steam locomotives used outside, | 80 |
| Number of compressed air locomotives used inside, | 12 |
| Number of compressed air locomotives used outside, .. | ..... |
| Number of electric motors used inside, | 31 |
| Number of electric motors used outside, ..... | ..... |
| Number of gasoline locomotives used inside, ..... | ..... |
| Number of fans in use, | 56 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 35 |
| Number of non-gaseous mines in operation, | 46 |
| Number of new mines opened, | 1 |
| Number of old mines abandoned, | 3 |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|--|-------------------------|
| G. B. Markle Company, | 1,698,741 |
| Coxe Brothers and Company, Incorporated, | 959,396 |
| Lehigh Valley Coal Company, | 948,469 |
| A. Pardee and Company, | 634,905 |
| Pardee Brothers and Company, Incorporated, | 575,123 |
| C. M. Dodson and Company, | 392,192 |
| Upper Lehigh Coal Company, | 240,629 |
| Harwood Coal Company, | 238,401 |
| M. S. Kemmerer and Company, | 127,082 |
| J. S. Wentz and Company, | 123,482 |
| Harleigh Brookwood Coal Company, | 116,939 |
| Hazle Mountain Coal Company, | 58,680 |
| Wolf Coal Company, | 13,136 |
| Thomas R. Reese and Son, | 4,753 |
| Total, | <u><u>6,131,928</u></u> |

Production by Counties

| | |
|----------------|-------------------------|
| Luzerne, | 6,073,350 |
| Carbon, | 58,578 |
| Total, | <u><u>6,131,928</u></u> |

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|--------------------------------------|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| G. B. Markle Co., | 6 | 4 | 10 | 3 | 2 | 5 | 583,124 | 566,247 | 1,918 | 867 | 2,785 | 320 | 217 | 639 | 434 |
| Coxe Brothers and Co., Inc., | 3 | 3 | 6 | 3 | 5 | 8 | 319,799 | 319,799 | 1,902 | 490 | 1,392 | 301 | ..... | 301 | 98 |
| Lehigh Valley Coal Co., | 3 | ..... | 3 | 3 | ..... | 3 | 316,156 | 316,156 | 1,406 | 715 | 2,121 | 469 | ..... | 469 | 258 |
| Lehigh Valley Coal Co., | 1 | ..... | 1 | 1 | ..... | 1 | 634,906 | 634,906 | 1,073 | 488 | 1,561 | 1,073 | ..... | 1,073 | ..... |
| Pardoe Brothers and Co., Inc., | 1 | ..... | 1 | 7 | 3 | 10 | 287,562 | 287,562 | 638 | 355 | 993 | 319 | ..... | 91 | 118 |
| C. M. Dodson and Co., | 6 | 1 | 7 | 7 | ..... | 7 | 82,169 | 82,169 | 483 | 351 | 244 | 81 | ..... | 69 | ..... |
| Upper Lehigh Coal Co., ..... | ..... | 1 | 1 | 1 | 1 | 2 | 56,052 | 56,052 | 317 | 124 | 240 | ..... | ..... | 116 | 194 |
| Harwood Coal Co., ..... | ..... | ..... | ..... | ..... | ..... | ..... | 232,400 | 232,400 | 399 | 106 | 308 | ..... | ..... | 371 | ..... |
| M. S. Kemmerer and Co., ..... | ..... | ..... | ..... | 2 | ..... | 2 | 49,361 | 49,361 | 399 | 106 | 308 | ..... | ..... | 371 | ..... |
| J. S. Wentz and Co., ..... | ..... | ..... | ..... | 3 | ..... | 3 | 61,741 | 61,741 | 136 | 115 | 251 | ..... | ..... | 68 | 96 |
| Harleigh Brookwood Coal Co., | 1 | ..... | 1 | 3 | 1 | 4 | 38,980 | 38,980 | 157 | 88 | 245 | 157 | ..... | 52 | 58 |
| Hazle Mountain Coal Co., ..... | ..... | ..... | ..... | 1 | 1 | 2 | 58,680 | 58,680 | 154 | 110 | 264 | ..... | ..... | 154 | 110 |
| Wolf Coal Co., ..... | ..... | ..... | ..... | ..... | ..... | ..... | 13,136 | 13,136 | 90 | 20 | 110 | ..... | ..... | 90 | ..... |
| Miscellaneous Companies, ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 6 | 3 | 9 | ..... | ..... | ..... | ..... |
| Totals and averages, | 22 | 6 | 28 | 36 | 18 | 54 | 278,724 | 170,331 | 7,595 | 3,948 | 11,543 | 346 | 658 | 211 | 219 |

Names of Operators

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Percentages | |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|-------------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | Totals |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | 1 | ..... | 2 | ..... | ..... | ..... | 1 | 1 | ..... | ..... | 1 | ..... | 6 | 27.27 |
| Falls of slate, | 1 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 2 | 1 | 1 | ..... | 6 | 27.27 |
| Falls of roof, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | 3 | 4.65 |
| Mine cars, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3 | 13.61 |
| Suffocation by gas, etc. | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 3 | 9.09 |
| Blasts, premature and otherwise, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | 1 | 3 | 13.61 |
| Struck by timber, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | 4.54 |
| Totals, | 2 | 1 | 3 | 1 | ..... | ..... | 1 | 3 | 3 | 2 | 5 | 1 | 22 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, ..... | ..... | 1 | ..... | 1 | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | 4 | 66.66 |
| Struck by timber, | 1 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 33.34 |
| Totals, | 1 | 1 | ..... | 1 | 1 | 1 | ..... | 1 | ..... | ..... | ..... | ..... | 6 | 100.00 |
| Grand totals inside and outside, | 3 | 2 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 2 | 5 | 1 | 28 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | 1 | 1 | 2 | 2 | 1 | ..... | ..... | 1 | ..... | 1 | 1 | 1 | 11 | 30.56 |
| Falls of slate, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 2 | 1 | ..... | ..... | 4 | 11.11 |
| Mine cars, | 1 | 4 | 1 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | 3 | 11 | 30.55 |
| Explosions of gas, | 1 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 5.56 |
| Blasts, premature and otherwise, ..... | ..... | 1 | 1 | 1 | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 4 | 11.11 |
| Falling into slopes, etc., ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 | 2.78 |
| Machinery, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2.78 |
| Rush of water, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2.78 |
| Struck by pick, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2.78 |
| Totals, | 3 | 8 | 5 | 4 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 4 | 36 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | 1 | ..... | 1 | ..... | 1 | 1 | 1 | 1 | 1 | ..... | ..... | ..... | 7 | 38.89 |
| Machinery, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 2 | 11.11 |
| Radiators, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 5.56 |
| Fall of coal, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | 5.56 |
| Fall of clay, ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 2 | 1 | ..... | 1 | 5.56 |
| Falling, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 6 | 33.33 |
| Totals, | 2 | 1 | 1 | ..... | 3 | 1 | 2 | 1 | 2 | 2 | 2 | ..... | 18 | 100.00 |
| Grand totals inside and outside, | 5 | 9 | 6 | 4 | 5 | 2 | 4 | 2 | 5 | 4 | 4 | 4 | 54 | ..... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, | 12 | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 1 | 1 | 12 | 1 | 9 |
| Miners' laborers, ..... | ..... | 1 | 12 | 1 | ..... | ..... | ..... | 12 | 1 | 1 | 12 | ..... | 10 |
| Drillers, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Doorboys and helpers, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 |
| Patchers, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 |
| Totals, .. | 24 | 1 | 23 | 1 | ..... | ..... | 1 | 23 | 2 | 2 | 23 | 1 | 22 |
| Outside | | | | | | | | | | | | | |
| Miners, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Trackmen, ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| Laborers, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Patchers, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 |
| Bookkeepers and clerks, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, | 1 | 1 | ..... | 1 | 1 | 1 | ..... | 1 | ..... | ..... | ..... | ..... | 6 |
| Grand totals inside and outside, | 25 | 2 | 23 | 2 | 1 | 1 | 1 | 4 | 2 | 2 | 25 | 1 | 28 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | Totals |
| Inside | | | | | | | | | | | | | |
| Assistant mine foremen, | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Miners, | 2 | 3 | 5 | 2 | 2 | .. | .. | .. | 1 | 2 | .. | 1 | 19 |
| Miners' laborers, | .. | 1 | 1 | 1 | .. | 1 | 2 | 1 | 1 | .. | 1 | .. | 8 |
| Drivers and runners, | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 4 |
| Doorboys and helpers, | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| Surveyors, | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Hitchers, | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Motormen, | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 |
| Totals, | 3 | 5 | 5 | 4 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 4 | 36 |
| Outside | | | | | | | | | | | | | |
| Laborers, | 1 | .. | 1 | .. | 1 | 1 | .. | 1 | 1 | .. | 1 | .. | 4 |
| Loaders, | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 |
| Screenmen, | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 |
| Engineers and firemen, | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 |
| Slatepickers (loys), | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 3 |
| Teamsters, | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 |
| Jig runners, | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 |
| Runners, | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 |
| Breakermen, | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 |
| Miners, | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 2 |
| Totals, | 2 | 1 | 1 | .. | 3 | 1 | 2 | 1 | 3 | 2 | 2 | .. | 18 |
| Grand totals inside and outside, | 5 | 9 | 6 | 4 | 5 | 2 | 4 | 2 | 5 | 4 | 4 | 4 | 54 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American, | 2 | ... | 1 | ... | ... | ... | 1 | 1 | 1 | ... | 2 | ... | 8 |
| German, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Polish, | ... | 1 | ... | ... | ... | ... | ... | 2 | ... | ... | 1 | ... | 4 |
| Italian, | ... | ... | ... | 2 | 1 | 1 | ... | ... | ... | ... | ... | ... | 4 |
| Slavonian, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 2 |
| Lithuanian, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| Austrian, | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Russian, | ... | 1 | 1 | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | 4 |
| Greek, | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | 2 |
| Bulgarian, | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Totals, | 2 | 2 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 2 | 3 | 1 | 28 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American, | 1 | 2 | 2 | ... | 1 | ... | 2 | ... | ... | 2 | 2 | 2 | 16 |
| Welsh, | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 |
| German, | ... | ... | ... | 1 | 1 | ... | ... | 1 | ... | 1 | ... | ... | 3 |
| Polish, | ... | ... | ... | 2 | ... | ... | ... | ... | 1 | ... | ... | ... | 3 |
| Hungarian, | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Italian, | 2 | ... | ... | 1 | ... | 2 | 1 | ... | 1 | ... | 1 | ... | 8 |
| Slavonian, | 1 | ... | 2 | ... | ... | ... | 1 | 1 | 1 | 1 | ... | 2 | 8 |
| Lithuanian, | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| Austrian, | 1 | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | 4 |
| Russian, | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | 2 |
| Greek, | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Tyrolean, | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Magyar, | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 |
| Totals, | 5 | 9 | 6 | 4 | 5 | 2 | 4 | 2 | 5 | 4 | 4 | 4 | 54 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Area of furnace bars in square feet | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at Inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|---|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|-------------|--------------------|-------------------------------------|----------------------------------|---|--|--|-----------------------------------|
| G. B. Markle Co. Jeddo No. 4 and Elbervale Colliery, | Slope, | Gaseous, | Fan, | 16 | 4.6 | 4.9 | 85 | 1.2 | { Guibal, | Steam, ..... | ..... | ..... | 60,000 | 49,500 | 66,000 | 240 |
| Jeddo No. 4 Slope, | Slope, | Gaseous, | Fan, | 25 | 7.10 | 7.4 | 82 | 3.2 | | | | | 59,800 | 47,300 | 74,400 | 109 |
| Jeddo No. 4 Shaft, | Shaft, | Non-gas, | Fan, | 16 | 4.6 | 4.8 | 82 | 0.5 | { Guibal, | ..... | ..... | ..... | 34,000 | 18,400 | 34,000 | 90 |
| Elbervale, Mammoth and Wharton, | Slope, | Gaseous, | { Fan, | 10 | 3.1 | 4.7 | 103 | 1.8 | | | | | 55,000 | 28,000 | 54,000 | 79 |
| Elbervale, Primrose, | Slope, | Gaseous, | | 16 | 5 | 2.7 | 135 | .8 | { Guibal, | Electricity, ..... | ..... | ..... | 37,800 | 14,000 | 18,800 | 30 |
| Jeddo No. 7 Colliery: Primrose and Holmes Voins, | Slope, | Non gas, | Fan, | 16 | 4.6 | 4.8 | 50 | .6 | | | | | 34,400 | 25,400 | 38,000 | 46 |
| Mammoth and Wharton, | Slope, | Non gas, | Natural, ..... | ..... | ..... | ..... | ..... | ..... | { Guibal, | ..... | ..... | ..... | 10,000 | 7,700 | 15,000 | 20 |
| Highland No. 2 Colliery: Highland No. 1, | Slope, | Gaseous, | Natural, | 16 | 4.5 | 4.8 | 70 | ..... |  |  |  |  | 37,000 | 32,000 | 41,000 | 70 |
| Highland No. 2, | Slope, | Gaseous, | Fan, | 16 | 4.5 | 4.8 | 90 | 1.1 | { Guibal, | Steam, ..... | ..... | ..... | 25,000 | 21,000 | 31,000 | 66 |
| Highland No. 6, | Slope, | Non-gas, | Fan, | 16 | 4.6 | 4.9 | 90 | 1. | | | | | 65,000 | 49,000 | 77,000 | 106 |
| Highland No. 5 Colliery: Highland No. 5, | Slope, | Gaseous, | Fan, | 16 | 4.6 | 4.8 | 100 | 1.9 | { Guibal, | Steam, ..... | ..... | ..... | 55,000 | 40,500 | 70,500 | 146 |
| Highland Nos. 8-9 and 10, | Slope, | Non-gas, | Fan, | 7 | 3.8 | 1.6 | 100 | 1. | | | | | 32,000 | 18,200 | 34,800 | 66 |
| Coxe Brothers and Co., Inc. Drifton Nos. 1 and 2 Colliery: Drifton No. 1, | Slope, | Non-gas, | 2 Fans, | 16 | 4 | 4 | 50 | ..... | { Guibal, | Steam, ..... | ..... | ..... | 67,000 | 62,000 | 69,000 | 83 |
| Drifton No. 2, | Slope, | Gaseous, | | 18 | 4 | 5.6 | 60 | ..... |  |  |  |  | 36,000 | 49,000 | 145,300 | 84 |

TABLE I.—Continued

| Names of Operators and Mines | Number of persons employed inside | | | | | | | | | | | | | | |
|--|--|-------------|-------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|---------|---------|-------|
| | Number of cubic feet of air per minute passing out at outlet | | | | | | | | | | | | | | |
| | Total number of cubic feet of air per minute circulating in all the splits | | | | | | | | | | | | | | |
| | Number of cubic feet of air per minute entering the mine at inlet | | | | | | | | | | | | | | |
| | Number of splits of air currents | | | | | | | | | | | | | | |
| | Area of furnace bars in square feet | | | | | | | | | | | | | | |
| | Power used | | | | | | | | | | | | | | |
| | Name of fan | | | | | | | | | | | | | | |
| | Water gauge developed—in inches | | | | | | | | | | | | | | |
| | Number of revolutions per minute | | | | | | | | | | | | | | |
| | Depth of blades in feet and inches | | | | | | | | | | | | | | |
| | Width of blades in feet and inches | | | | | | | | | | | | | | |
| | Diameter of fan in feet and inches | | | | | | | | | | | | | | |
| | Method of ventilation | | | | | | | | | | | | | | |
| | Gaseous or non-gaseous | | | | | | | | | | | | | | |
| | Kind of opening | | | | | | | | | | | | | | |
| Pardee Brothers and Co., Inc. Lattimer Colliery: Lattimer No. 8, Lattimer Nos. 9 and 10, Lattimer No. 22, Lattimer No. 20, Lattimer No. 27, Lattimer No. 17, | Slope,..... | Fan,..... | Gaseous,... | ..... | 2.6 | 2.6 | 240 | 1.6 | ..... | 20,000 | 12,000 | 60,000 | 77,000 | 21,000 | 19 |
| | Slope,..... | 2 Fans, ... | Gaseous,... | ..... | 4.3 | 4.3 | 155 | 1.6 | ..... | 36,000 | 60,000 | 60,000 | 100,000 | 100,000 | 40 |
| | Slope,..... | 2 Fans, ... | Non-gas,... | ..... | 1.3 | 1.3 | 145 | 1. | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | Slope,..... | Fan,..... | Non-gas,... | ..... | 1.67 | 1.67 | 150 | ..... | ..... | 20,760 | 12,700 | 12,700 | 21,500 | 21,500 | 50 |
| | Slope,..... | Fan,..... | Gaseous,... | ..... | 1.5 | 1.5 | 105 | ..... | ..... | 32,000 | 27,000 | 27,000 | 33,000 | 33,000 | 100 |
| | Shaft,..... | 2 Fans, ... | Gaseous,... | ..... | 1.5 | 1.5 | 572 | ..... | ..... | 35,000 | 30,000 | 30,000 | 38,700 | 38,700 | 182 |
| | | | | | | | 226 | | | | | | | | |
| C. M. Dodson and Co. Beaver Brook Colliery: Beaver Brook No. 5, Beaver Brook No. 6, Beaver Brook No. 10, Beaver Brook No. 15, Beaver Brook No. 16, Beaver Brook No. 17, | Slope,..... | Natural,... | Non-gas,... | ..... | ..... | ..... | ..... | ..... | ..... | 8,000 | 7,500 | 7,500 | 10,000 | 10,000 | 31 |
| | Slope,..... | Natural,... | Non-gas,... | ..... | ..... | ..... | ..... | ..... | ..... | 3,500 | 2,200 | 2,200 | 4,500 | 4,500 | 12 |
| | Slope,..... | Fan,..... | Gaseous,... | ..... | 4.6 | 4.6 | 80 | ..... | ..... | 40,000 | 32,500 | 32,500 | 42,000 | 42,000 | 180 |
| | Slope,..... | Fan,..... | Gaseous,... | ..... | 5 | 5 | 90 | ..... | ..... | 25,000 | 27,000 | 27,000 | 31,000 | 31,000 | 40 |
| | Slope,..... | Natural,... | Gaseous,... | ..... | 4.5 | 4.5 | ..... | ..... | ..... | 22,000 | 22,000 | 22,000 | 22,000 | 22,000 | 41 |
| | Slope,..... | Natural,... | Gaseous,... | ..... | ..... | ..... | ..... | ..... | ..... | 22,000 | 21,500 | 21,500 | 22,000 | 22,000 | 100 |
| | Slope,..... | Natural,... | Non-gas,... | ..... | ..... | ..... | ..... | ..... | ..... | 22,000 | 22,000 | 22,000 | 22,000 | 22,000 | 12 |

| | | | | | | | | | |
|------------------------------|------------|-------------|--------------|-----|-----|------|-----|-----------------|------------------|
| Upper Lehigh Coal Co. | | | | | | | | | |
| Upper Lehigh Colliery: | | | | | | | | | |
| Upper Lehigh No. 1,† | Slope,.... | Non-gas,... | Fan,.... | 10 | 3 | 2 | 70 | Guibal,.... | Steam,.... |
| Upper Lehigh No. 2,† | Slope,.... | Non-gas,... | Natural,.... | ... | ... | ... | ... | ... | ... |
| Upper Lehigh No. 5, 1,... | Slope,.... | Non-gas,... | Natural,.... | 3.5 | 3 | 1.5 | 275 | Guibal,.... | Steam,.... |
| Upper Lehigh No. 17,... | Slope,.... | Non-gas,... | Fan,.... | 3.5 | 3 | 1.5 | 275 | Guibal,.... | Steam,.... |
| Upper Lehigh No. 15,... | Slope,.... | Non-gas,... | Fan,.... | ... | ... | ... | ... | ... | ... |
| Harwood Coal Co. | | | | | | | | | |
| Harwood Colliery: | | | | | | | | | |
| Harwood No. 1,.... | Slope,.... | Non-gas,... | Natural,.... | 15 | 4.6 | 4.3 | 72 | Guibal,.... | Steam,.... |
| Harwood No. 3,.... | Slope,.... | Gaseous,... | Fan,.... | ... | ... | ... | ... | ... | ... |
| Harwood, Humboldt Road | Slope,.... | Non-gas,... | Natural,.... | ... | ... | ... | ... | ... | ... |
| Harwood, 31 Humboldt,... | Slope,.... | Non-gas,... | Fan,.... | 8 | 3.6 | 1.10 | 100 | Sturtevant,.... | Electricity,.... |
| Harwood, New Humboldt,... | Slope,.... | Non-gas,... | Fan,.... | ... | ... | ... | ... | ... | ... |
| M. S. Kemmerer and Co. | | | | | | | | | |
| Sandy Run Colliery: | | | | | | | | | |
| Sandy Run No. 5,.... | Slope,.... | Non-gas,... | Natural,.... | { | ... | ... | ... | ... | ... |
| Sandy Run No. 5,.... | Slope,.... | Non-gas,... | Natural,.... | { | ... | ... | ... | ... | ... |
| Sandy Run No. 8,.... | Slope,.... | Non-gas,... | Natural,.... | { | ... | ... | ... | ... | ... |
| Sandy Run No. 10,.... | Slope,.... | Non-gas,... | Natural,.... | { | ... | ... | ... | ... | ... |
| J. S. Wentz and Co. | | | | | | | | | |
| Hazel Brook Colliery: | | | | | | | | | |
| Hazel Brook No. 1,.... | Slope,.... | Gaseous,... | Natural,.... | ... | ... | ... | ... | ... | ... |
| Hazel Brook No. 5,.... | Slope,.... | Gaseous,... | Natural,.... | ... | ... | ... | ... | ... | ... |
| Hazel Brook No. 9,.... | Slope,.... | Non-gas,... | Natural,.... | ... | ... | ... | ... | ... | ... |
| Hazel Brook No. 10,.... | Slope,.... | Non-gas,... | Natural,.... | ... | ... | ... | ... | ... | ... |
| Hazel Brook No. 14,.... | Slope,.... | Non-gas,... | Natural,.... | ... | ... | ... | ... | ... | ... |
| Hazel Brook No. 16,.... | Slope,.... | Non-gas,... | Natural,.... | ... | ... | ... | ... | ... | ... |
| Hazel Brook No. 17,.... | Slope,.... | Non-gas,... | Fan,.... | 7 | 3 | 1.6 | 200 | Sturtevant,.... | Steam,.... |
| Hartleigh Brookwood Coal Co. | | | | | | | | | |
| Hartleigh Colliery: | | | | | | | | | |
| Back Mountain,.... | Slope,.... | Non-gas,... | Fan,.... | 12 | 3.7 | 3 | 90 | Guibal,.... | Steam,.... |
| Fish Tail,.... | Slope,.... | Non-gas,... | Fan,.... | 7 | 3.6 | 3 | 225 | Guibal,.... | Electricity,.... |
| Spear Point,.... | Slope,.... | Non-gas,... | Natural,.... | ... | ... | ... | ... | ... | ... |
| Hazel Mountain Coal Co. | | | | | | | | | |
| Hazel Mountain Colliery: | | | | | | | | | |
| Hazel Mountain No. 1,.... | Slope,.... | Non-gas,... | Fan,.... | 16 | 6 | 4.6 | 72 | Guibal,.... | Steam,.... |
| Hazel Mountain No. 3,.... | Slope,.... | Non-gas,... | Fan,.... | 16 | 4 | 3.11 | 85 | Guibal,.... | Steam,.... |

†Idle.
†Robbing. No air measurements taken.

TABLE I.—Continued

| | | | |
|--|--|---|---------------|
| Names of Operators and Mines | Number of persons employed inside | 8 20 62 | ..... |
| | Number of cubic feet of air per minute passing out at outlet | 49,000 | ..... |
| | Total number of cubic feet of air per minute circulating in all the splits | 39,000 | ..... |
| | Number of cubic feet of air per minute entering the mine at inlet | 48,400 | ..... |
| | Number of splits of air currents | * * * * | ..... |
| | Area of furnace bars in square feet | ..... | ..... |
| | Power used | Steam,..... | ..... |
| | Name of fan | Vulcan,..... | ..... |
| | Water gauge developed—in inches | ..... | ..... |
| | Number of revolutions per minute | 93 | ..... |
| | Depth of blades in feet and inches | 4 | ..... |
| | Width of blades in feet and inches | 3 | ..... |
| | Diameter of fan in feet and inches | 16 | ..... |
| | Method of ventilation | Natural,..... Natural,..... Fan,..... | Natural,..... |
| | Gaseous or non-gaseous | Non-gas,..... Non-gas,..... Non-gas,..... | Non-gas,..... |
| | Kind of opening | Slope,..... Slope,..... Slope,..... | Slope,..... |
| Wolf Coal Co. Wolf Colliery: Wolf No. 3,..... Wolf No. 5,..... Wolf No. 6,..... Thomas R. Reese and Son Dusky Diamond Colliery: Dusky Diamond,..... | | | |

*Robbing. No air measurements taken.

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|--|---|---|--------------------------------------|---------------------------------------|---------------------|---------------------------------|
| G. B. Markle Co. Jeddo No. 4 and Ebervale, Jeddo No. 7, Highland Nos. 2 and 5, | Luzerne, | A. B. Jessup, | Jeddo, | G. P. Troutman, Assistant Genl. Mgr., | Jeddo, | Lehigh Valley |
| Coxe Brothers and Co., Inc., Driftton Nos. 1 and 2, Deringer, Gowen and Tom- pkins, Eckley and Buck Mountain, Eckley Washery, | Luzerne, | Thomas Thomas, | Wilkes-Barre, | W. H. Davies, | Hazleton, | Lehigh Valley |
| Lehigh Valley Coal Co. Hazleton No. 1, Hazleton Shaft, Spring Mountain and Spring, Brook, Spring Brook Washery, | Luzerne, Luzerne, Luzerne, Carbon, | Thomas Thomas, | Wilkes-Barre, | W. H. Davies, | Hazleton, | Lehigh Valley |
| A. Pardee and Co. Cranberry, | Luzerne, | Frank Pardee, | Hazleton, | | | Lehigh Valley |
| Pardee Brothers and Co., Inc. Lattimer, | Luzerne, | C. Pardee, Jr., Presi- dent, | Lattimer Mines, | | | Lehigh Valley |
| C. M. Dodson and Co. Beaver Brook, | Luzerne, | J. B. Connell, | Beaver Brook, | F. W. Facker, | Beaver Brook, | C. R. R. of N. J. and L. V., |
| Upper Lehigh Coal Co. Upper Lehigh, | Luzerne, | T. E. Snyder, | Hazleton, | C. H. Rohland, | Upper Lehigh, | C. R. R. of N. J. |
| Harwood Coal Co. Harwood, | Luzerne, | H. M. Crankshaw, | Hazleton, | | | Lehigh Valley |
| M. S. Kemmerer and Co. Sandy Run, | Luzerne, | M. S. Kemmerer, | New York, N. Y., 143 Liberty St., | J. P. Powell, | Sandy Run, | C. R. R. of N. J. |
| J. S. Wentz and Co. Hagle Brook, | Luzerne, | T. E. Snyder, General Manager, | Hazleton, | C. H. Rohland, | Upper Lehigh, | Lehigh Valley |
| Harleigh Brookwood Coal Co. Harleigh, | Luzerne, | W. G. Thomas, | Pottsville, | I. D. Thomas, | Hazleton, | Lehigh Valley |

TABLE 1.—Continued

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|-----------------------------------|----------------|--------------------------------|--------------------------------------|------------------------|--------------------|-------------------|
| Hazle Mountain Coal Co. | Luzerne, | W. R. McTurk, President. | Philadelphia, Pennsylvania Building. | Morton H. McTurk, ... | Girardville, | Lehigh Valley |
| Hazle Mountain, | Luzerne, | Joseph G. Saricks, .. | Freedland, ..... | ..... | ..... | Lehigh Valley |
| Wolf, | Luzerne, | Thomas R. Reese, ... | Andenried, ..... | ..... | ..... | C. R. R. of N. J. |
| Thomas R. Reese and Son | | | | | | |
| Dusky Diamond, | | | | | | |

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | Locomotives | | | | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors |
|--------------------------------|----------|-------------------|-------------|---------|-------------|-------------------|----------|-------|-------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Air |  |  |  |  |  |  |  | Electric |
| G. B. Markle Co., | Luzerne, | ..... | ..... | 21 | 10,100 | 10,100 | ..... | 19 | 6 | 13 | 50 | 12,071 | 12 | 15,384 | 12,448 | 10 |
| Coxe Brothers and Co., Inc., |  | ..... | 49 | 31 | 9,375 | 9,375 | ..... | 18 | 6 | ..... | 52 | 4,853 | 12 | 14,400 | 8,450 | 7 |
| Lehigh Valley Coal Co., |  | ..... | 58 | 38 | 9,250 | 9,250 | ..... | 9 | ..... | 14 | 56 | 18,525 | 21 | 19,500 | 14,900 | 5 |
| A. Farlee and Co., |  | ..... | 33 | 336 | 6,235 | 6,235 | ..... | 16 | ..... | ..... | 27 | 2,500 | ..... | 23,100 | 7,000 | ..... |
| Pardee Brothers and Co., Inc., | | 11 | ..... | ..... | 12 | 4,000 | 4,000 | ..... | 10 | ..... | 3 | 27 | 18,550 | ..... | ..... | ..... |
| C. M. Dodson and Co., |  | ..... | ..... | 25 | 3,600 | 3,600 | ..... | 3 | ..... | ..... | 1 | 19 | 1,410 | ..... | ..... | ..... |
| Upper Lehigh Coal Co., |  | ..... | ..... | 11 | 2,480 | 2,480 | ..... | 3 | ..... | ..... | ..... | 19 | 27 | 12,100 | 3,750 | ..... |
| Harwood Coal Co., |  | ..... | ..... | ..... | ..... | ..... | ..... | 3 | ..... | ..... | ..... | 10 | 990 | 3,200 | 3,200 | ..... |
| Harwood Coal Co., |  | ..... | ..... | ..... | ..... | 890 | 890 | ..... | 3 | ..... | ..... | 10 | 990 | 3,200 | 3,200 | ..... |
| M. S. Kemmerer and Co., |  | ..... | ..... | 12 | 1,800 | 1,800 | ..... | 1 | ..... | ..... | ..... | 8 | 446 | 3,200 | 3,200 | ..... |
| J. S. Wentz and Co., |  | ..... | ..... | 4 | 500 | 500 | ..... | 3 | ..... | ..... | ..... | 39 | 855 | 4,420 | 4,420 | ..... |
| Harleigh Brookwood Coal Co., |  | ..... | ..... | 12 | 1,480 | 1,480 | ..... | 2 | ..... | ..... | ..... | 5 | 300 | 5,100 | 5,100 | ..... |
| Hazle Mountain Coal Co., |  | ..... | ..... | 10 | 1,425 | 1,425 | ..... | 1 | ..... | ..... | ..... | 15 | 1,030 | 6,300 | 6,300 | ..... |
| Wolf Coal Co., |  | ..... | ..... | 3 | 425 | 425 | ..... | ..... | ..... | ..... | ..... | 3 | 300 | 2,000 | 2,000 | ..... |
| Thomas R. Reese and Son, | ..... | ..... | 1 | 125 | 125 | ..... | ..... | ..... | ..... | ..... | 1 | 60 | 1,180 | 670 | ..... |  |
| Totals, | ..... | 11 | 330 | 253 | 50,290 | 50,620 | 1 | 92 | 12 | 31 | 386 | 55,213 | 99 | 115,024 | 88,668 | 27 |

*Jeddo drainage tunnel.

§Drainage into Beaver Brook.

†Steam purchased from Harwood Electric Company.

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|-------------------------|----------------|------------------|-----|-------------------|------------------|-------------------|-----------------------------|----------|--|
| Jan. 6 | Meter Steneskie, | Slavonian,... | Miner, | 35 | M. | 1 | 3 | Ebervale, | Luzerne, | Instantly killed by fall of coal at face of robbing while placing a set of timber. |
| 16 | Howard A. Howells, .. | American,... | Chief clerk, ... | 37 | M. | 1 | 1 | Highland No. 5, .. | | Instantly killed. Struck by a falling post of breaker plane while breaker was burning. Outside. |
| 19 | Benton Shaver, | American,... | Miner, | 63 | M. | 1 | 1 | Drifton Nos. 1 and 2, | | Instantly killed by fall of slate at face of robbing. |
| Feb. 5 | Joseph Resetskie, | Polish, | Miner, | 47 | M. | 1 | 1 | Ebervale, | | Fatally injured by stepping in front of car. Outside. |
| 23 | Mike Whiteko, | Russian,... | Laborer, | 40 | M. | 1 | 3 | Beaver Brook, | | Instantly killed between car and platform gangway. |
| March 1 | Steve Medvis, | American,... | Laborer, | 24 | S. | .... | .... | Jeddo No. 7, | | Fatally injured by fall of coal at face of breast. |
| 9 | Alesio Visantino, | Austrian,... | Driller, | 25 | S. | .... | .... | Lattimer, | | Suffocated by dynamite fumes in drainage tunnel. |
| 15 | Thomas Boyzick, | Russian, ... | Laborer, | 30 | M. | 1 | 2 | Beaver Brook, | | Instantly killed by fall of coal at face of gangway. |
| April 15 | James Scarpstis, | Italian, | Trackman, | 50 | M. | 1 | .... | Beaver Brook, | | Fatally injured by being run over by small locomotive. Outside. |
| 26 | Carmel Defulvio, | Italian, | Laborer, | 34 | M. | 1 | .... | Lattimer, | | Fatally injured by fall of slate in breast. He knocked out a prop that was in the way of putting in track. |
| May 5 | Mike Blsel, | Italian, | Laborer, | 25 | S. | .... | .... | Jeddo No. 4, | | Struck by flying piece of wood from blast strip-ping. Outside. |
| June 24 | Peter Atcavello, | Italian, | Trackman, | 35 | M. | 1 | .... | Ebervale, | | Instantly killed by being run over by trip of strip-ping cars loaded with coal. Outside. |
| July 13 | Christ Throne, | American,... | Miner, | 39 | M. | 1 | 2 | Cranberry, | | Fatally injured by fall of coal near face of breast. |
| Aug. 7 | John Petraskie, | Polish, | Miner, | 24 | M. | 1 | .... | Highland No. 2, .. | | Instantly killed by fall of coal in chute while robbing. |
| 9 | Romeo Bessner, | American,... | Patcher, | 18 | S. | .... | .... | Upper Lehigh, | | Fatally injured by loaded coal cars in strip-ping. Outside. |
| 21 | John Nazalko, | Poush, | Laborer, | 22 | S. | .... | .... | Harlegh, | | Suffocated by rush of coal in chute at face of robbing. |
| 28 | Ivan Christolphi, | Bulgarian, .. | Laborer, | 33 | M. | 1 | 1 | Highland No. 5, .. | | Instantly killed by flying coal from shot in pillar. |

| | | | | | | | | | | |
|-------|----|------------------------|-----------------|----------------|----|----|------|------|---------------------|--|
| Sept. | 11 | Steve Rutsko, | Russian, | Laborer, | 38 | M. | 1 | 2 | Hazleton Shaft, ... | Fatally injured by fall of slate in breast manway. |
| | 15 | Simon Wasdovish, ... | American, ... | Doorboy, | 18 | S. | .... | .... | Deringer, | Fatally injured by cars. He attempted to get on a trip passing through his door, in tunnel. |
| | 17 | Harry Pena, | Greek, | Miner, | 50 | M. | 1 | 3 | Beaver Brook, | Instantly killed by fall of slate at face of breast. |
| Oct. | 12 | Harry Gush, | Greek, | Laborer, | 40 | M. | 1 | 2 | Beaver Brook, | Fatally injured by fall of slate in face of gangway killed by blast. He lighted fuse and was standing in hole in face of breast. |
| | 19 | Stanley Kascon, | Lithuanian, ... | Miner, | 30 | M. | 1 | .... | Hazleton No. 1, ... | Instantly killed. Struck by prop that was displaced by slide of rock in buggy gangway. |
| Nov | 13 | Mike Martin, | Russian, | Laborer, | 28 | M. | 1 | .... | Highland No. 2, .. | Fatally injured. Squeezed between motor and prop on high side of gangway. |
| | 19 | Mike Donish, | American, ... | Patcher, | 29 | S. | .... | .... | Spring Mountain, . | Fatally injured by fall of coal at face of robbing on gangway. |
| | 27 | John George, | Polish, | Miner, | 48 | M. | 1 | 4 | Ebervale, | Instantly killed by fall of slate at face of robbing. |
| | | Michael Ruby, | Slavonian, ... | Miner, | 25 | M. | 1 | 3 | Beaver Brook, | Instantly killed by fall of rock at face of robbing. |
| | 29 | Herman Smith, | American, ... | Laborer, | 19 | S. | .... | .... | Deringer, | Fatally injured by blast in cross-cut. There was a misunderstanding between him and the miner working toward him. |
| Dec. | 17 | August Carter, Jr., .. | German, | Miner, | 41 | M. | 1 | 2 | Beaver Brook, | |

Lazzerne,

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|-------|---------------------------|----------------|--------------------|-----|-------------------|-----------------------|--------------|---|
| Jan. | 8 John Meronick, | Austrian,.... | Miner, | 31 | M. | Latimer, | | Face, neck and hands burned by explosion of gas in chute. |
| | 20 Dominick Gallian, | Italian,.... | Slatepicker, | 15 | S. | Sandy Run, | | Arm fractured by falling against chute in breaker. Outside. |
| | 21 Joseph Swinecrop, | Italian,.... | Laborer, | 26 | S. | Drifton, | | Shin fractured between top of floor and mule wheel on railroad at breaker. Outside. |
| | 26 William Mealing, | American,.... | Driver, | 23 | M. | Sandy Run, | | Rib fractured. Squeezed between mule and car on gangway. |
| | 27 Roman Burdash, | Slavonian,.... | Miner, | 31 | M. | Hazleton Shaft, | | Back bruised by fall of coal at face of breast. |
| Feb. | 2 David Price, | Welsh, | Hitcher, | 26 | M. | Harleigh, | Luzerne,.... | Hand crushed by machinery of electric pump. |
| | 3 John Bonczuskie, | Polish,.... | Laborer, | 29 | M. | Harleigh, | | Foot slightly squeezed by cars on grade gangway. |
| | 5 Adam Peum, | American,.... | Driver, | 19 | M. | Harleigh, | | Shoulder bruised by cars on gangway. |
| | 12 John Wear, | Welsh, | Miner, | 31 | M. | Beaver Brook, | | Head lacerated and knee and hand injured at head of breaker. Outside. |
| | 13 John Jasinski, | Polish,.... | Miner, | 45 | M. | Jeddo No. 4, | | Face at back lacerated by flying coal from blast in cross-cut. |
| | 16 John Sherlo, | Austrian,.... | Driver, | 20 | S. | Spring Brook, | Carbon,..... | Leg fractured and ankle injured by cars on gangway. |
| | 20 Thomas Gillespie, | American,.... | Doorboy, | 20 | S. | Drifton, | | Jaw bone fractured and ear cut by being caught between car and timber on gangway. |
| | 22 John Kish, | American,.... | Slatepicker, | 15 | S. | Sandy Run, | | Shin bone fractured while trying to extricate himself hurriedly from between the pipes of a radiator. Outside. |
| | 24 John Burka, | Polish,.... | Miner, | 45 | M. | Wolf, | | Small bone in leg fractured by fall of coal in breast. |
| March | 3 John Polack, | Slavonian,.... | Loader, | 23 | S. | Latimer, | Luzerne,.... | Leg crushed between railroad cars at breaker. Outside. |
| | Daniel Conlin, | American,.... | Miner, | 40 | M. | Latimer, | | Sight of eye destroyed and face and body lacerated by flying coal from a blast while on his way home along gangway. |
| | 5 John Fedor, | American,.... | Miner, | 29 | M. | Latimer, | | Arm severely lacerated by fall of coal in chute. |

| | | | | | | | |
|-------|----|------------------------|----------------|------------------------------|----|---------------------------|--|
| March | 6 | Patrick Sharkey, | American, ... | Miner, | 32 | M. Lattimer, | Hands injured between top of car and roof of gangway, which car on which he was riding became dislodged. |
| | 9 | Steve Dusick, | Slavonian,... | Miner, | 28 | M. Lattimer, | Leg fractured by pick penetrating it while picking up bottom coal in breast. |
| | 26 | Harry Skimbo, | Greek, | Miner, | 23 | M. Hazle Mountain, | Ankle lacerated by fall of coal in buggy gangway. |
| April | 17 | Joseph Beanco, | Italian,... | Miner, | 36 | M. Drifton, | Leg fractured by fall of coal in cross-cut. |
| | 21 | Martin Verop, | Hungarian,... | Miner, | 43 | M. Beaver Brook, | Leg fractured by fall of coal while removing breast pillars. |
| | 24 | Charles Korai, | Hungarian,... | Laborer, | 40 | M. Upper Lehigh, | Eye injured and face lacerated by blast. A short fuse was used. |
| | 26 | George Deitrick, | German, | Assitant mine foreman, | 46 | M. Beaver Brook, | Face and hands burned by explosion of gas while making examination for gas. |
| May | 4 | Yazek Salego, | Polish, | Miner, | 42 | M. Cranberry, | Foot lacerated by fall of slate at face of boiler. |
| | 8 | Mike Lipko, | Russian, | Loader, | 23 | S. Drifton, | Injured internally by falling from car that he was loading under the breaker. Outside. |
| | 11 | John Seroeki, | Russian, | Screen-man, | 28 | M. Drifton, | Skull fractured and shoulder dislocated by machinery on the breaker. Outside. |
| | 13 | Daniel Petrick, | Magyar, | Miner, | 38 | M. Sandy Run, | Leg fractured by fall of coal in gangway. |
| | 14 | Mike Digon, | American,... | Slatepicker, | 16 | S. Sandy Run, | Leg fractured by falling while playing on breaker. Outside. |
| June | 15 | Dominick Demarko, .. | Italian, | Loader, | 27 | M. Hazle Mountain, | Pelvis fractured between railroad car and door-post under the breaker. Outside. |
| | 19 | Carmelo Lange, | Italian, | Laborer, | 23 | S. Hazle Brook, | Hand and face lacerated by flying coal from blast gangway. |
| July | 9 | Rube Woodring, | American,... | Teamster, | 48 | S. Drifton, | Compound fracture of leg. He fell from hay wagon and the wheel passed over him. Outside. |
| | 12 | George Kurotz, | Lithuanian,... | Laborer, | 31 | M. Beaver Brook, | Leg fractured by cars on turnout at bottom of slope. |
| | 13 | Carmine Lungo, | Italian, | Laborer, | 22 | S. Beaver Brook, | Skull fractured by falling down rock chute in course of driving. |
| | 26 | Harry Vanauker, | American,... | Runner, | 25 | S. Jeddo No. 7, | Hand crushed and compound fracture of leg by falling under railroad car above breaker. Outside. |
| Aug. | 12 | John Margjolin, | Slavonian,... | Laborer, | 51 | M. Highland No. 2, | Shoulder fractured between box of dump car and a pile of slate when car was dumped. Outside. |
| | 27 | Martin Lyock, | Polish, | Laborer, | 43 | M. Beaver Brook, | Jaw bone fractured by fall of coal at face of robbing. |
| Sept. | 3 | Mike Morasik, | Austrian,... | Miner, | 50 | M. Spring Mountain, | Skull fractured by fall of coal in stripping. Outside. |
| | 9 | George Hudock, | Hungarian,... | Laborer, | 36 | M. Upper Lehigh, | Leg injured between bumpers of cars. Outside. |
| | 14 | Pomboy Fanelli, | Italian, | Miner, | 32 | M. Harleigh, | Leg fractured by fall of clay in stripping. Outside. |
| | 21 | Matty Bobciak, | Slavonian,... | Laborer, | 27 | M. Harwood, | Skull fractured by fall of slate on side of gangway. |
| | 22 | Alfred Margettl, | Tyrolean, | Miner, | 23 | S. Hazleton Shaft, | Leg fractured by fall of slate at face of breast. |

Luzerne.....

TABLE 5.—Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|--------|-------------------------|---------------|-------------------|-----|-------------------|-----------------------|---------------|--|
| Oct. 9 | Frank Burke, | American,... | Jig-runner, | 19 | S. | Hazleton No. 1, | | Skull fractured by falling from breaker to the ground a distance of 25 feet. Outside. |
| 12 | Henry Carter, | German,.... | Miner, | 36 | M. | Beaver Brook, | | Small bone in leg fractured and scalp lacerated by fall of slate in gangway. His laborer was fatally injured at the same time. |
| | George Knyrim, | American,... | Engineer, | 56 | M. | Eckley, | | Shoulder dislocated by falling from platform to ground a distance of 7 feet, when wrench slipped from steam pipe. Outside. |
| 26 | Andrew Stashko, | Slavonian,... | Miner, | 49 | M. | Lattimer, | | Eye injured by falling coal while in the act of barring. |
| Nov. 6 | Silvia Corrasa, | Austrian,.... | Laborer, | 21 | S. | Hazle Brook, | | Back injured. Caught between car and collar on slope. |
| 13 | Roger Hinterltner, .. | American,... | Miner, | 32 | M. | Deringer, | | Pelvis fractured by fall of coal at face of breast. |
| 19 | Ralph Yannuzzi, | Italian,..... | Breakerman, | 22 | M. | Lattimer, | | Hand injured by machinery on breaker. Outside. |
| 28 | Andrew Subal, | American,... | Laborer, | 17 | S. | Lattimer, | Luzerne, | Concussion of brain. He fell a distance of 15 feet on breaker while stepping out of the way of visitors. |
| Dec. 1 | Gottlieb Ahlborn, | American,... | Motorman, | 39 | M. | Ebervale, | | Laceration of back and thigh. Caught between the bumpers of empty car and motor on gangway. |
| 17 | Mike Sabo, | Slavonian,... | Driver, | 27 | M. | Sandy Run, | | Small bone in leg fractured by cars on gangway. |
| 22 | Edward Strook, | Slavonian,... | Miner, | 25 | M. | Lattimer, | | Hands, face and neck burned by hot coal falling upon him while working at mine fire. |
| 21 | Price Youngman, | American,... | Surveyor, | 42 | M. | Highland No. 5, | | Pelvis fractured and urethra ruptured by being squeezed between air-motor and car containing timber on gangway. |

BREAKER FIRES

At about 10 o'clock P. M. on January 15, fire was discovered in the Highland No. 5 breaker of the G. B. Markle Company. The officials of the company were having a social session in the Casino at Jeddo when the alarm of fire was given, and they immediately went to the scene of the fire and put forth every effort to extinguish it. As the fire started near the top of the breaker it was very difficult to reach the flames with the streams of water from the hose, and in a short time it was found that the breaker could not be saved, and the efforts of the fire fighters were turned toward saving the boiler house and other buildings in close proximity to the burning structure, and preventing the fire from communicating with the underground workings through the slope. This was done by cutting away the breaker plane a safe distance from the mouth of the slope.

Preparations were made in a short time, by making a few changes inside the mine, to take the coal from No. 5 and prepare it at the Jeddo No. 4 breaker, and the surplus which could not be handled at Jeddo No. 4 was taken to Jeddo No. 7 breaker, which was operated night and day until the new breaker was erected at No. 5. The new breaker, which is constructed of steel, began the preparation of coal about August 3, and has a capacity of 2000 tons per day.

At about 2 o'clock A. M. on May 25, fire was discovered in the Lattimer breaker of Pardee Brothers and Company Incorporated. The fire originated in the breaker engine house, presumably through some of the machine gang, who were making some repairs to the breaker that night, igniting material in the engine room and leaving it without being noticed. In a short time the whole engine house was aflame which communicated with the breaker, and the fire got beyond control, and in a very short time the whole breaker was a mass of ruins. The old No. 3 breaker was pressed into service, remodeled and made to handle considerable of the coal during the time that the new breaker was being constructed. A few cars were run through the new breaker on December 15, but it did not take all the coal until the latter part of December. The new breaker has a capacity of about 2000 tons per day.

CONDITION OF COLLIERIES

G. B. MARKLE COMPANY

Jeddo No. 4 and Elbertvale Colliery.—Ventilation, roads, drainage and condition as to safety, good.

Jeddo No. 7 Colliery.—No. 3 and Wharton Slopes: Ventilation, roads, drainage and condition as to safety, good.

Highland Nos. 2 and 5 Collieries.—Ventilation, roads, drainage and condition as to safety, good.

COXE BROTHERS AND COMPANY, INCORPORATED

Drifton Nos. 1 and 2, Deringer, Gowen and Tomhicken, Eckley and Buck Mountain Collieries.—Ventilation, roads, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Hazleton No. 1, Hazleton Shaft, Spring Mountain and Spring Brook Collieries.—Ventilation, roads, drainage and condition as to safety, good.

A. PARDEE AND COMPANY

Cranberry Colliery.—Ventilation good, roads and drainage, fair. Condition as to safety, good.

PARDEE BROTHERS AND COMPANY, INCORPORATED

Lattimer Colliery.—Ventilation good. Roads and drainage, fair. Condition as to safety, good.

C. M. DODSON AND COMPANY

Beaver Brook Colliery.—Ventilation good. Roads and drainage, fair. Condition as to safety, good.

UPPER LEHIGH COAL COMPANY

Upper Lehigh Colliery.—Ventilation good. Roads and drainage, fair. Condition as to safety, good.

HARWOOD COAL COMPANY

Harwood Colliery.—Ventilation good. Roads and drainage, fair. Condition as to safety, good.

M. S. KEMMERER AND COMPANY

Sandy Run Colliery.—Ventilation good. Roads and drainage, fair. Condition as to safety, good.

J. S. WENTZ AND COMPANY

Hazle Brook Colliery.—Ventilation good. Roads and drainage, fair. Condition as to safety, good.

HARLEIGH BROOKWOOD COAL COMPANY

Harleigh Colliery.—Buck Mountain Slope: Ventilation, roads, drainage and condition as to safety, good.

Fish Tail Slope: Ventilation, roads, drainage and condition as to safety, good.

Spear Point Slope: Ventilation good. Roads and drainage, fair. Condition as to safety, good.

HAZLE MOUNTAIN COAL COMPANY

Hazle Mountain Colliery.—Ventilation good. Roads and drainage, fair. Condition as to safety, good. Abandoned in August.

WOLF COAL COMPANY

Wolf Colliery.—Ventilation, roads, drainage and condition as to safety, good.

THOMAS R. REESE AND SON

Dusky Diamond Colliery.—Ventilation, roads, drainage and condition as to safety, good.

IMPROVEMENTS

G. B. MARKLE COMPANY

Jeddo No. 7 Colliery.—Built a hopper and shed over same for handling the Highland No. 5 coal, which was prepared in this breaker at night owing to the destruction of the Highland No. 5 breaker by fire.

Transferred the 150 H. P. electric hoist and house from Slope No. 1 to the new Wharton slope.

Installed 2 Norman flat pickers and 2 spiral separators on chestnut size.

The slope in the Wharton vein is being continued to basin.

A tunnel has been driven from the Mammoth to the Wharton vein, a distance of 110 feet, for the purpose of development.

A tunnel has been driven from the Holmes to the Mammoth vein, a distance of 60 feet, for robbing purposes.

The stripping operations are still in progress, 395,000 cubic yards of rock having been removed during the year.

Ebervale Colliery.—Installed a 16 by 12 by 10 inch duplex 1000 G. P. M. Worthington pump in boiler room, for fire and fresh water service.

Commenced work on a new central mine timber yard by grading the surface and laying the tracks.

Installed a 12 by 12 $\frac{1}{4}$ by 12 inch air compressor in boiler house for blowing wells.

Completed a 20 by 40 foot colliery washhouse with bath, etc.

Completed a 14 by 40 foot building, which is used as a colliery office, warehouse and first aid room.

The No. 5 stripping is being continued. 500,000 cubic yards of earth and rock were removed during the year.

Two artesian wells have been drilled, one west of southwest reservoir, depth 540 feet, and one northeast of Lake View reservoir, depth 450 feet.

Jeddo No. 4 Colliery.—Erected a 75,000-gallon water tank for the boiler plant.

Installed a new 12-inch main for the breaker exhaust steam heating system.

Installed a 6 by 24 foot 4-deck crank-connected shaking screen in east side of breaker.

Installed a 16 by 12 by 10 inch 1000-G. P. M. duplex Worthington pump in boiler feed room for fire service.

Built a 30 by 48 by 9 foot stable at the shaft to replace the one destroyed by fire.

Built a new slush trough, 600 feet long, from the Hammer crusher in the breaker to the new bore hole, for flushing the crushed refuse into the mines.

Installed 2 Norman flat pickers in the west side of the breaker.

Built a 52-foot addition to locomotive house.

Built a 21 by 12 by 250-foot car-heating or thawing shed at the breaker for the east side.

Erected a 16 by 74-foot building, which is used as a colliery office, warehouse and first aid room.

Built a 20 by 50-foot colliery washhouse, with shower baths, etc.

Built a stocking plant for stocking prepared coal. This plant consists of two inclined conveyors, which will stock 50,000 tons each, at the rate of 125 tons per hour per conveyor. The conveyors are driven by a 100 H. P. 13 by 16-inch engine.

Put a new 25-ton revolving steam shovel into service picking up stock coal.

Put a new 18-ton saddle tank locomotive into service.

Flushing is being continued in the Mammoth and Wharton veins.

The various slate and culm bank deposits are being picked up and run through the washery.

A highway has been built from the west end of Oakdale village, a distance of 3300 feet, which eliminates two grade crossings, heavy grades and curves.

A highway has been built from a point west of West Oakdale village to replace the Stockton highway which is on the site of proposed Mammoth vein stripping.

A slope has been sunk in the shaft workings of the Orchard vein, a distance of 130 feet and an 8 by 10 Flory hoisting engine installed.

A tunnel has been driven in the shaft workings from Orchard to Primrose vein, a distance of 60 feet.

A rock hole 70 feet long has been driven from the Primrose to Orchard vein, and buggy gangways are being driven east and west therefrom.

Two airshafts have been sunk from the surface to the Primrose vein, a depth of 40 feet each.

Two airshafts have been sunk from the surface to the Orchard vein, a depth of 35 feet each.

An airshaft has been sunk from the surface to the Wharton vein, a depth of 40 feet.

A slope has been started in the east spoon of the Jeddo basin, Wharton vein, for development purposes.

An 8-inch bore hole has been drilled east of No. 4 slope for flushing the Mammoth and Wharton vein breasts.

An artesian well has been drilled on the south side of property, a depth of 570 feet.

Excavation was begun and completed for the changing of empty stand tracks in vicinity of Jeddo No. 4 breaker, preparatory to stripping Mammoth vein under present tracks.

A stripping has been started on the south side of the Jeddo property to uncover a local basin in the Wharton vein. 475,000 cubic yards of earth and rock have been removed to date.

Highland No. 5 Colliery.—Built an addition to the smithshop and installed a drill press and bolt cutter.

Built a 15 by 45 foot lumber shed near carpenter shop.

Installed a 16 by 12 by 10 inch 1000-G. P. M. Worthington duplex pump in boiler feed room for fire service.

Installed a new 14 by 8 by 12 inch duplex boiler feed pump.

The old frame breaker which was destroyed by fire January 15, 1915, was replaced by a steel breaker that was put into operation August 2, 1915, 199 days after the fire. The structure consists of structural steel, with concrete floors; the sides are covered with corrugated iron and the roof with asbestos-protected corrugated steel. It is equipped with an exhaust heating system, electric lights and signals, a fire system, and all modern appliances. The machinery is driven by a pair of 16 by 36 inch 500 H. P. Corliss engines.

A temporary dump chute was built for the purpose of loading the coal in railroad cars and shipping to Jeddo No. 7 for preparation during the erection of the steel breaker.

A tunnel has been driven from the Buck Mountain vein to the Gamma vein, a distance of 180 feet, for development purposes.

There have been 12 sets of steel timber with concrete reinforcement placed at the mouth of the Trial Slope.

Three rock holes, each 12 feet in length, have been driven from the No. 8 vein to the No. 9 vein.

The Plane "L" Gamma and the No. 10 veins are worked out and abandoned.

An artesian well has been drilled northeast of colliery, a depth of 600 feet.

Highland No. 2 Colliery.—Built a 30 by 50 foot power house and installed two 160 K. W. 250 volt D. C. engine-driven generators for electric haulage, and a 12 by 14½ by 14 inch air compressor for blowing artesian wells.

Built a new double intake exhaust fan, 16 feet by 4 feet 6 inches, driven by a 6 by 14 by 18 inch compound steam engine.

The sides and roof of the top of the main hoisting slope were concreted and 22 sets of steel mine timber were erected.

The sides and roof of the top of the manway east of the main slope were concreted and 11 sets of steel mine timber erected.

Erected a 75,000-gallon fresh water tank.

The new breaker was completed, which is a frame structure with a steel frame. It is equipped with a heating system, electric lights and signals, fire system and all modern appliances. The machinery is driven by 2 pairs of 14 by 30 inch 300 H. P. Corliss engines, and wash water is delivered by a 2500 G. P. M. 12 by 23 by 14 by 36 inch compound duplex pump.

A hospital 8 by 12 feet has been driven in rock at the foot of the rock slope.

An artesian well has been drilled north of the Freeland reservoir a depth of 500 feet.

Installed a 7-ton electric locomotive.

Highland No. 6 Slope.—One columnway and one steamway have been driven in the Alpha vein to the surface, preparatory to installing an isolated pumping plant.

An artesian well has been drilled north of reservoir, a depth of 500 feet.

LEHIGH VALLEY COAL COMPANY

Hazleton No. 1 Colliery.—A concrete pit for car and engine repairs was constructed in the car shop.

A steam cylinder was installed in the breaker to operate the dump gate.

A new office was built for the coal inspector.

A spray system for fighting fires was installed in the breaker.

Steel timber was put in on the 7th level turnout and in several places along No. 1 slope, replacing wood.

A rock tunnel 8 by 12 by 33 feet was driven from the Wharton to the Gamma vein on the 7th level.

From the No. 6 West stripping 287,121 cubic yards of overburden were removed.

Hazleton Shaft Colliery.—The wooden ventilation stack at No. 40 slope was replaced by one made of steel.

A 7-foot high steel stack was erected around the top of the Gamma pump shaft as a precaution against accidents.

A "Roybel" automatic overwinding device was placed on the shaft coal hoisting engine.

An electric signal horn was installed at the Deringer car shed.

A concrete sump for the breaker wash water pump was constructed.

The breaker silt and refuse conveyor lines were extended during the year.

A portable boiler stock coal conveyor was erected at the boiler house.

A 1½-inch bolt cutter was installed in the machine shop. A spray system for fighting fire was installed in the breaker.

An 18-inch terra cotta drain was put in to drain the breaker elevator pit.

A turnout and engine house were made, and an electric hoist was installed for a slope to be sunk to the basin of the West Tracy vein.

A brick dam 9 feet thick was built in the tunnel connecting the rock slope Gamma gangway with the Wharton vein. Installed a device for locking the fans and gates at the first and second lifts of the shaft when not in use.

From the Hazleton No. 5 North stripping during the year 163,912 cubic yards of cover were removed.

Spring Mountain Colliery.—A Thew revolving steam shovel was placed in the stripping to load coal.

An automatic track signal was placed in the Oneida coal shed.

A locomotive crane was installed in the timber yard to facilitate the handling of timber for the mine. The silt and ash conveyor lines were extended.

Four spiral separators were placed in the breaker; also a spray system for fighting fire.

A water tank for locomotive use was erected. The electric haulage was extended to the Lykens rock slope workings.

From the Northwest stripping 123,499 cubic yards of cover were removed.

Spring Brook Colliery.—A concrete floor was placed in the shaft engine house, and the entire building fireproofed.

A new 10-inch column pipe was laid in the shaft from the bottom to the top.

COXE BROTHERS AND COMPANY, INCORPORATED

Drifton Nos. 1 and 2 Colliery.—The work of remodeling the breaker was commenced. The old timber at the mouth of No. 1 slope was replaced with 12 inch, 10 inch and 8 inch "I" beams resting on concrete side walls, for a distance of 70 feet from the mouth.

Concrete side walls were erected along the north and east sides of the G. and M. pump house and the floor concreted.

To facilitate transportation, a rock skip was taken off the East tunnel near the N. E. Wharton gangway. The mouth of the No. 2 tender slope was improved by the removal of the old timber and in their stead placing 15 inch "I" beams resting on concrete side walls for a distance of 65 feet from the mouth.

From the Lattimer stripping 9,099 cubic yards of cover were removed.

Deringer and Gowen Colliery.—A portable stock coal conveyor was installed. Telephones were installed at the following places: Top and bottom of Nos. 2 and 4 shafts, shaft engine house and Mine Foreman's office at Deringer, Gowen No. 4 Mine Foremen's office, No. 4 slope engine house and bottom of No. 4 slope.

The steam lines leading from the Gowen boiler house to the Diagonal slope and No. 3 fan were removed and new lines put in on the north side of Roberts Run.

A tile washhouse 18 by 22 feet with a cement floor, was erected near the Gowen Creek tunnel.

No. 14 tunnel was driven from the north dip of the Gamma vein to the Wharton.

The Deringer drift mouth was remodeled by removing the wood timber and replacing with steel and concrete.

From the Gowen south crop stripping 195,894 cubic yards of cover were removed.

Tomhicken Colliery.—An 8-foot Elliott electric fan was erected on the Buck Mountain vein.

A tile substation was erected to take care of proposed electric haulage.

Eckley Colliery.—An underground slope was sunk in the Wharton vein south dip of a local basin in No. 6 slope and an engine and pump installed.

During the year the No. 8 stripping was completed with the removal of 8,276 cubic yards of cover.

Council Ridge.—The work of enlarging and regrading the No. 1 tunnel was commenced.

The third section stripping was completed and the fourth and fifth sections started during the year.

From the different Council Ridge strippings the following number of cubic yards of overburden were removed: Third Section, 53,478; Fourth Section, 354,028; Fifth Section, 32,251; No. 11 Section, 201,855; No. 12 Section, 204,423.

PARDEE BROTHERS AND COMPANY, INCORPORATED

Lattimer Colliery.—A new breaker, No. 5, with a capacity of 2,500 tons and with all modern machinery and improvements, has been erected on the site of old No. 4 breaker, which was destroyed by fire May 25, 1915. After the destruction of No. 4 breaker by fire, many

improvements were made in No. 3 breaker in the way of new rolls, spirals, jigs, conveyor lines, etc., in order to get it in condition to handle the run of mine coal.

A new head frame and coal pocket has been erected at the top of No. 20 slope.

A new 3 inch steam line was run from the main line to No. 22 West to Slope "B," a distance of 2,200 feet.

A new steel hospital building, 10 feet by 12 feet, has been placed in the second lift of Slope No. 27.

A tunnel 7 feet by 11 feet has been driven from the Gamma vein to the Mammoth vein, a distance of 100 feet, on the east side of Slope No. 27, first lift.

A rock hole 6 feet by 8 feet and 65 feet in length has been driven from the Gamma vein to the basin of the Mammoth vein on the east side of Slope No. 27, third lift.

A rock hole 6 feet by 8 feet and 56 feet in length has been driven from No. 2 East Gamma gangway to the basin of the Wharton vein at the foot of Slope No. 24.

Milnesville.—The Milnesville drainage tunnel has been advanced 650 feet during the year, leaving about 850 feet to be driven to reach a point under Milnesville shaft.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held at the Young Men's Christian Association Building, Hazleton, May 18 and 19. The Board of Examiners was composed of David J. Roderick, Mine Inspector; John J. Turnbach, Superintendent, Hazleton; James North, Miner, Drifton; John O'Hara, Miner, Hazleton.

The following persons passed a satisfactory examination and were granted certificates.

MINE FOREMEN

Bernard J. Sharpe, Samuel Watkins, Lansford; Robert L. Sinyard, Robert Black, Summit Hill; Timothy Maloney, Francis A. Gallagher, Drifton; John Rhoda, Freeland; Grover C. Lesser, Upper Lehigh; Edmund Williams, Sandy Run; John K. O'Donnell, Eckley; John J. Dougherty, McAdoo; Edward Quirk, Tresckow.

ASSISTANT MINE FOREMEN

William L. Williams, Lansford; John Sharpe, William L. Evans, Walter Spiegelholder, Summit Hill; John E. Lewis, Nesquehoning; Henry Klose, Albert Kocay, Joseph Stoffa, Freeland; James Mulhall, Joseph A. Thomas, Drifton; William S. Gallagher, Frank Fay, Tresckow; Joseph Lawrence, Samuel Martinovich, Tomhicken; Frederick O. Lesser, Upper Lehigh; Theodore Weaver, Sandy Run; Simon Fellin, Deringer; Hugh Ferry, McAdoo; Anthony McHale, Jeanesville; John C. Somers, Milnesville; James O'Hara, Frank Kracoski, Thomas James, Hazleton.

TWELFTH DISTRICT

SCHUYLKILL COUNTY

Mahanoy City, Pa., February 18, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Twelfth Anthracite District, for the year ending December 31, 1915.

Respectfully submitted,

P. C. FENTON,
Inspector

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 8 |
| Number of mines, | 21 |
| Number of mines in operation, | 21 |
| Number of tons of coal shipped to market, | 2,246,496 |
| Number of tons used at mines for steam and heat, | 423,795 |
| Number of tons sold to local trade and used by employees, | 40,046 |
| Number of tons produced, | 2,710,337 |
| Number of tons produced by compressed air machines, ..... | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 4,759 |
| Number of persons employed outside, | 2,004 |
| Number of fatal accidents inside of mines, | 11 |
| Number of fatal accidents outside, ..... | ..... |
| Number of non-fatal accidents inside of mines, | 12 |
| Number of non-fatal accidents outside, ..... | ..... |
| Number of tons of coal produced per fatal accident inside, | 246,394 |
| Number of tons produced per fatal accident outside, .. | ..... |
| Number of tons produced per fatal accident inside and outside, | 246,394 |
| Number of persons employed per fatal accident inside, .. | 433 |
| Number of persons employed per fatal accident outside, .. | ..... |
| Number of persons employed per fatal accident inside and outside, | 615 |
| Number of persons employed per non-fatal accident inside, | 396 |
| Number of persons employed per non-fatal accident outside, ..... | ..... |
| Number of persons employed per non-fatal accident inside and outside, | 564 |
| Number of wives made widows, | 9 |
| Number of children made orphans, | 31 |
| Number of steam locomotives used inside of mines, | 17 |
| Number of steam locomotives used outside, ..... | ..... |
| Number of compressed air locomotives used inside, | 17 |
| Number of compressed air locomotives used outside, .. | ..... |
| Number of electric motors used inside, | {16} |
| Number of electric motors used outside, | { } |
| Number of gasoline locomotives used inside, ..... | ..... |
| Number of fans in use, | 21 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 21 |
| Number of non-gaseous mines in operation, ..... | ..... |
| Number of new mines opened, ..... | ..... |
| Number of old mines abandoned, ..... | ..... |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|---|------------------|
| Philadelphia and Reading Coal and Iron Company, . . . | 2,099,055 |
| Lehigh Valley Coal Company, | 611,282 |
| Total, | <u>2,710,337</u> |

Production by Counties

| | |
|-----------------------|------------------|
| Schuylkill, | <u>2,710,337</u> |
|-----------------------|------------------|

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|---|-----------------|---------|--------|---------------------|---------|--------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Total | Outside | Inside | Total | Outside | Inside | | | | | | | | | |
| Philadelphia and Reading Coal and Iron Co., | 9 | ..... | ..... | 9 | ..... | ..... | 233,228 | 190,823 | 3,994 | 1,635 | 5,629 | 443 | ..... | 363 | ..... |
| Lehigh Valley Coal Co., | 2 | ..... | ..... | 2 | ..... | ..... | 305,641 | 611,282 | 765 | 369 | 1,134 | 382 | ..... | 765 | ..... |
| Totals and averages, | 11 | ..... | ..... | 11 | ..... | ..... | 246,394 | 225,861 | 4,759 | 2,004 | 6,763 | 433 | ..... | 396 | ..... |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|--------|----------|----------|---------|-----------|--------|------|------|-----|-------|-------|----------|
| | Totals | December | November | October | September | August | July | June | May | April | March | February |
| Welsh, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| German, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Polish, | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Slavonian, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lithuanian, | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Austrian, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Greek, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Totals, | 11 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|--------|----------|----------|---------|-----------|--------|------|------|-----|-------|-------|----------|
| | Totals | December | November | October | September | August | July | June | May | April | March | February |
| American, | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| English, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Polish, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lithuanian, | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Syrian, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Totals, | 12 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Area of furnace bars in square feet | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|--|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|---------------|--------------|-------------------------------------|----------------------------------|---|--|--|-----------------------------------|
| Philadelphia and Reading Coal and Iron Co. | | | | | | | | | | | | | | | | |
| Ellengowan Colliery: | | | | | | | | | | | | | | | | |
| Ellengowan. | Shaft, .. | Gaseous, .. | Fan, ... | 20 | 6.5 | 6.0 | 80 | 1.4 | { Guibal, ... | Steam, ... | .. | 10 | 70,692 | 9,875 | 71,169 | 181 |
| Ellengowan. | Slope, ... | | | 15 | 7.0 | 6.6 | 76 | .5 | | | .. | 10 | 73,025 | 1,075 | 73,529 | 197 |
| Ellengowan. | Slope, ... | | | 15 | 7.0 | 6.6 | 76 | .5 | | | .. | 7 | 79,552 | 7,475 | 80,043 | 239 |
| Saint Nicholas Colliery: | | | | | | | | | | | | | | | | |
| Saint Nicholas. | Slope, | Gaseous, .. | Fan, | 21 | 7.0 | 6.6 | 90 | 2.3 | Guibal, | Steam, | .. | 10 | 44,060 | 35,039 | 44,900 | 230 |
| Suffolk Colliery: | | | | | | | | | | | | | | | | |
| Suffolk. | { Slope, ... | Gaseous, .. | Fan, ... | 18 | 6.5 | 5.6 | 60 | 1.4 | { Guibal, ... | Steam, ... | .. | 5 | 25,614 | 18,988 | 36,111 | 74 |
| Suffolk. | | | | 18 | 6.5 | 5.6 | 60 | 1.2 | | | .. | 3 | 28,112 | 11,999 | 28,445 | 50 |
| Suffolk. | | | | 18 | 6.5 | 5.6 | 60 | 1.1 | | | .. | 2 | 13,663 | 7,385 | 13,789 | 45 |
| Maple Hill Colliery: | | | | | | | | | | | | | | | | |
| Maple Hill. | { Shaft, .. | Gaseous, ... | Fan, ... | 21 | 7.0 | 6.6 | 75 | 1.9 | { Guibal, ... | Steam, ... | .. | 10 | 72,370 | 36,260 | 73,500 | 280 |
| Maple Hill. | | | | 21 | 7.0 | 6.6 | 75 | 1.9 | | | .. | 8 | 67,400 | 34,600 | 68,100 | 280 |
| Maple Hill. | | | | 21 | 7.0 | 6.6 | 73 | 1.7 | | | .. | 9 | 38,200 | 21,400 | 38,800 | 244 |
| Tunnel Ridge Colliery: | | | | | | | | | | | | | | | | |
| Tunnel Ridge. | Slope, | Gaseous, .. | Fan, | 21 | 7.0 | 6.3 | 85 | 2.5 | Guibal, | Steam, | .. | 4 | 67,578 | 18,222 | 69,302 | 95 |
| Tunnel Ridge. | Slope, | Gaseous, .. | Fan, | 15 | 7.0 | 6.6 | 85 | 2.6 | Guibal, | Steam, | .. | 10 | 75,284 | 25,315 | 77,335 | 117 |
| Mahanoy City Colliery. | | | | | | | | | | | | | | | | |
| Mahanoy City. | Slope, | Gaseous, .. | Fan, | 21 | 7.0 | 6.3 | 86 | 2.0 | Guibal, | Steam, | .. | 10 | 69,830 | 20,930 | 72,150 | 130 |
| Mahanoy City. | Slope, | Gaseous, .. | Fan, | 12 | 3.5 | 3.0 | 80 | .9 | Guibal, | Steam, | .. | 7 | 49,708 | 35,000 | 50,311 | 117 |

| North Mahanoy Colliery: North Mahanoy, | Slope, | Gaseous, .. | Fan, | 21 | 7.6 | 6.3 | 83 | 1.1 | Gulbal, | Steam, | 8 | 127,280 | 65,660 | 130,750 | 338 |
|---|--------------|-------------|------------|----|-----|------|-----|-----|---------------|--------------|----|---------|---------|---------|-----|
| Lehigh Valley Coal Co. Park Colliery, 1, | } Slope, ... | Gaseous, .. | Fan, ... | 9 | 4.0 | 6.1 | 110 | 1.0 | Sirocco, . | Steam, ... | 10 | 33,550 | 28,500 | 37,250 | 110 |
| Park No. 2, | | | | 8 | 4.0 | 4.11 | 130 | 1.0 | Sirocco, . | | 10 | 41,500 | 35,200 | 47,650 | 69 |
| Park No. 3, | | | | 16 | 5.4 | 4.5 | 85 | 1.5 | Sirocco, . | | 8 | 91,000 | 7,100 | 91,000 | 119 |
| Park No. 4, | | | | 12 | 3.5 | 3.0 | 130 | 1.5 | Sirocco, . | | 5 | 18,800 | 1,450 | 18,900 | 130 |
| Park No. 7, | | | | 12 | 3.0 | 1.5 | 130 | .8 | Sturtevant, . | | 5 | 17,000 | 1,500 | 18,000 | 41 |
| Primrose Section, | } | | (| 8 | 4.0 | 4.6 | 140 | 1.8 | Sirocco, . | | 10 | 151,675 | 137,152 | 158,740 | 211 |

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superin- tendent | Post Office | Railroad to Mine |
|--|-------------------|-----------------------------------|---------------------|-----------------------------|-------------------|--------------------------|
| Philadelphia and Reading Coal and Iron Co. } Bhangowan, } Sandy, } Sandy, Nicholas, } Sandy, } Maple Hill, } Tunnel Ridge, } Mahanoy City, } North Mahanoy, } | Schuylkill, | W. J. Richards, | Pottsville, | Edward Kaercher, .. | Pottsville, | Philadelphia and Reading |
| Lehigh Valley Coal Co. Park Place, } Springdale Washery, } | Schuylkill, | Thomas Thomas, | Wilkes-Barre, | T. R. Jones, | Park Place, | Lehigh Valley |

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employes | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | | Number of horses and mules |
|--|---------------|--|--|---|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|-------|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| Philadelphia and Reading Coal and Iron Co. | | | | | | | | | | | | | | |
| Ellengowan, | { Schuylkill, | 296,745 | 41,290 | 1,058 | 339,093 | 215 | 1,165 | 2 | 2 | 153,275 | 72,547 | ..... | 66 | |
| Edna Nicholas, | | 132,807 | 40,212 | 945 | 193,364 | 251 | 829 | 1 | 1 | 59,529 | 91,777 | 21,787 | 86 | |
| St. Michaels, | | 281,955 | 58,399 | 1,271 | 311,435 | 297 | 832 | 2 | 1 | 53,625 | 93,749 | ..... | 64 | |
| Maple Hill, | | 498,737 | 66,667 | 752 | 565,496 | 314 | 1,374 | 2 | 1 | 211,175 | 120,565 | 52,512 | 57 | |
| Tunnel Ridge, | | 74,599 | 51,425 | 752 | 126,686 | 129 | 418 | 1 | 1 | 13,025 | 50,485 | 8,179 | 52 | |
| Mahanoy City, | | 177,703 | 33,832 | 30,702 | 242,297 | 215 | 619 | 1 | 1 | 46,575 | 73,479 | 4,955 | 51 | |
| North Mahanoy, | | 272,745 | 45,056 | 3,033 | 279,834 | 211 | 762 | 1 | ..... | 47,025 | 94,395 | ..... | 65 | |
| Totals, | | 1,755,201 | 306,691 | 37,163 | 2,099,055 | ..... | 5,629 | 9 | 11 | 526,630 | 542,778 | 82,903 | 391 | |
| Lellich Valley Coal Co. | | | | | | | | | | | | | | |
| Park Colliery, | { Schuylkill, | 389,762 | 117,012 | 2,883 | 509,657 | 229 | 1,101 | 2 | 1 | 126,775 | 71,393 | 107,474 | 106 | |
| Springdale Washery, | | | 101,533 | 32 | ..... | 101,625 | 249 | 33 | ..... | ..... | ..... | ..... | ..... |  |
| Totals, | | 491,295 | 117,104 | 2,883 | 611,282 | ..... | 1,134 | 2 | 1 | 126,775 | 71,393 | 107,474 | 106 | |
| Grand totals, | | 2,246,496 | 423,795 | 40,046 | 2,710,337 | ..... | 6,763 | 11 | 12 | 653,425 | 614,171 | 190,377 | 497 | |

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | Locomotives | | | | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors | |
|---|-------------------|-------------------|-------------|---------|-------------|-------------------|----------|-------|-------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|----------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Alr | | | | | | | | Electric |
| Philadelphia and Reading Coal and Iron Co., | Schuylkill, ..... | ..... | ..... | 124 | 15,550 | 15,550 | ..... | 13 | 17 | 11 | 250 | 35,767 | 22 | 46,102 | 12,350 | 2 | 11 |
| Lehigh Valley Coal Co., | Schuylkill, ..... | ..... | ..... | 29 | 6,550 | 6,550 | ..... | 4 | ..... | 5 | 85 | 11,738 | 12 | 17,500 | 8,550 | 1 | 2 |
| Totals, ..... | ..... | ..... | ..... | 153 | 22,100 | 22,100 | ..... | 17 | 17 | 16 | 335 | 47,505 | 34 | 63,602 | 20,900 | 3 | 13 |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|----------------------------|----------------|-------------------------|-----|-------------------|------------------|-------------------|------------------|---------------|--|
| Jan. 30 | Andrew Serano, | Slavonian, .. | Timberman, .. | 32 | M. | 1 | 5 | Mahanoy City, | Schuylkill .. | Instantly killed by fall of coal while placing car on track in main gangway. |
| March 19 | Anthony Kochanavich, | Lithuanian, | Miner, | 55 | M. | 1 | 7 | Tunnel Ridge, | | Fatally injured by explosion of gas at face of breast caused by an outburst of gas in gangway. Died April 6. |
| 23 | George Shulite, | Greek, | Driver, | 23 | S. | .... | .... | Maple Hill, .. | | Fatally injured by falling under mine car on main gangway, falling March 23. |
| June 9 | Stiney Krancofsky, | Polish, | Miner, | 39 | M. | 1 | .... | Saint Nicholas, | | Instantly killed by falling timber while traveling in main gangway. |
| Aug. 10 | William Yatsco, | Polish, | Miner, | 51 | M. | 1 | .... | Ellangowan, .. | | Internally injured by fall of slate at face of breast. Died August 16. |
| 13 | John Kutshick, | Polish, | Laborer, | 27 | S. | .... | .... | Suffolk, | | Instantly killed by fall of rock at face of gangway while preparing for a blast. |
| Sept. 21 | William B. Jones, | Welsh, | Assistant mine foreman, | 54 | M. | 1 | .... | Maple Hill, .. | | Instantly killed by fall of coal at face of gangway while instructing the miners how to secure the place. |
| Oct. 11 | Andrew Stanick, | Austrian, | Laborer, | 25 | M. | 1 | .... | Park Place, .. | | Fatally injured by a piece of coal that rolled down and struck him on the head, at face of slope. Died on way to hospital. |
| Nov. 29 | Mike Marchavage, | Lithuanian, | Miner, | 55 | M. | 1 | 7 | Park Place, .. | | Fatally injured by falling down chute in getting away from blast. Died December 2. |
| Dec. 3 | Henry Kellman, | German, | Miner, | 41 | M. | 1 | 6 | North Mahanoy, | | Killed by fall of rock while robbing pillars on counter gangway. |
| 11 | Charles Oditus, | Lithuanian, | Miner, | 37 | M. | 1 | 6 | Ellangowan, .. | | Killed by fall of slate at face of breast. |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|-------------------------|---------------|-----------------------|-----|-------------------|-----------------------|---------------|--|
| March 19 | Andro Stushits, | Lithuanian. | Miner, | 42 | M. | Tunnel Ridge, | Schuylkill .. | Slightly burned by gas at face of chute. |
| 25 | Frank Keever, | Lithuanian. | Laborer, | 25 | S. | Tunnel Ridge, | | Foot injured by a dynamite cap exploding while starting coal at battery. |
| April 8 | Ivin Ecker, | American. | Engineer, | 32 | M. | Maple Hill, | | Injured by two locomotives colliding in main tunnel. |
| 17 | Alex Shovadis, | American. | Superintendent, | 18 | S. | Maple Hill, | | Injured by fall of slate at face of gangway. |
| May 3 | Charles Kline, | American. | Miner, | 55 | M. | Maple Hill, | | Slightly burned by gas at face of breast. |
| June 3 | Anthony Kirooski, | Lithuanian. | Miner, | 38 | M. | Maple Hill, | | Injured by a prop falling on him on main gangway. |
| 5 | John Kranchuck, | Lithuanian. | Laborer, | 25 | S. | Suffolk, | | Slightly injured by being caught between mine cars. |
| Aug. 18 | Joe Yeskavage, | American. | Motor helper, | 18 | S. | Park, | | Slightly injured by fall of coal at face of gangway. |
| Sept. 21 | David John, | Syrian, | Laborer, | 23 | S. | Maple Hill, | | Injured by fall of slate at face of robbing. |
| Oct. 25 | Paul Shlitski, | Polish, | Miner, | 24 | S. | Ellangowan, | | Injured by fall of coal at face of breast. |
| Nov. 8 | John Jones, | American. | Miner, | 50 | M. | Saint Nicholas, | | Injured by being caught between car and timber on main gangway. |
| 9 | Walter Barlow, | English, ... | Runner, | 29 | S. | Ellangowan, | | |

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Ellangowan, Saint Nicholas, Suffolk, Maple Hill, Tunnel Ridge, Mahanoy City and North Mahanoy Collieries.—Ventilation, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Park Colliery.—Ventilation, drainage and conditions as to safety, good.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Ellangowan Colliery.—A tunnel was completed from face of East Middle Split gangway, fifth lift, elevation to connect with Maple Hill, Top Split, No. 5 plane gangway; total length, 123 1-3 yards.

Saint Nicholas Colliery.—A tunnel was completed to Top Split vein from West Bottom Split No. 50 counter gangway; total length, 32 1-3 yards.

A tunnel was driven to Top Split vein from Buck Mountain Water Level.

A tunnel was completed to Seven Foot vein from East Skidmore, Water Level gangway; total length, 23 yards.

Suffolk Colliery.—A rock hole for slushing Top Split No. 8 counter 115 feet, was completed; total length, 56 yards.

An electric hoist was installed for Holmes slope at Suffolk house.

Maple Hill Colliery.—Two rock holes were driven to Primrose vein for airways from Bore Hole slope No. 41 tunnel, Holmes workings, to connect with new 21 foot diameter fan; total length, 67 yards.

A rock hole on 30 degrees pitch, was completed from Bottom Split to Middle Split vein on line of No. 6 bore hole for slushing Bottom Split workings below No. 6 plane level; total length, 27 1-3 yards.

A pump room 20 feet wide by 16 feet high was driven in bottom rock of East Buck Mountain gangway, No. 2 Shaft Level at breast No. 1; total length, 19 yards; and a 27 by 50 by 12 by 48 inch compound pump, with 14 by 20 by 20 inch condenser was installed therein.

Tunnel Ridge Colliery.—The extension of the Lykens Valley Water Level tunnel to Lykens Valley vein was completed; total length, 53 2-3 yards.

North Mahanoy Colliery.—A tunnel to West Buck Mountain gangway first lift, was completed; total length, 88 1-6 yards.

A tunnel to Skidmore vein from Buck Mountain gangway was completed; total length, 56 2-3 yards.

An ash bin and elevators were installed at boiler house to take ashes inside.

Installed a vertical tip and trestle for turnout at west side of breaker for handling coal from Seven Foot drift.

LEHIGH VALLEY COAL COMPANY

Park Colliery.—A tunnel under the Lehigh Valley Railroad east of the breaker, and a plane were constructed for the purpose of taking timber to Nos. 3, 4 and 7 and Primrose slopes.

A 10 by 12 inch Flory engine was installed for this plane and housed in a 15 by 17 foot hollow tile building.

An 8 inch rope hole was drilled from the surface to the basin of the Buck Mountain vein.

A 25 horse power gasoline hoist was installed for the driving of the basin slope. The hoist is housed in a 13 foot 6 inch by 16 foot corrugated iron building.

An 8 inch rope hole was drilled from the surface to the basin of the Skidmore vein.

An 11 by 12 inch Brown engine was installed for the driving of the Basin slope, and housed in a 12 by 14 foot corrugated iron building.

A brick compressor house 20 feet 2 inches by 23 feet 1 inch, was constructed at No. 1 slope and a 19 by 12 by 14 inch Chicago air compressor installed therein.

A device to prevent overhoisting with engines was installed on No. 2 slope.

142,810 cubic yards of cover were removed from the Buck Mountain vein, North Dip stripping, making a total of 459,249 cubic yards removed to January 1, 1916.

A 300 B. and W. boiler was transferred from Primrose and installed at No. 4 boiler house.

A conveyor was installed on the north side of Springdale washery.

Park No. 1 Slope.—The slope is being sunk to the second level and steel timbers are set as the slope is being sunk.

A tunnel 478 feet long was driven from the Buck Mountain vein, North Dip, to the Mammoth Bottom Split, South Dip.

Park No. 7 Slope.—A tunnel 57 feet long was driven from the Buck Mountain vein, Bottom Split, to the Buck Mountain vein, Top Split, on the second level.

A tunnel 170 feet long was driven from the Buck Mountain vein, South Dip, to the Seven Foot vein, South Dip, on the second level. Basin slopes are being sunk in the Buck Mountain and Skidmore veins.

Primrose Slope.—An 8-inch steam line was constructed from the No. 4 boiler house to Primrose.

The inside shaft engines (18 by 30 inch Vulcan) were rebuilt and transferred to the Skidmore basin slope. The engines are housed in a 25 by 35 foot concrete and tile building.

An 18 by 36 inch Vulcan engine was installed for the Mammoth basin slope and housed in a 42 by 27 foot concrete and tile building.

The Skidmore basin slope was graded from the surface to the main level.

The timber was removed at the mouth of the tender slope and concrete sidewalls and reinforced concrete roof put in.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held at Mahanoy City, May 18 and 19. The Board of Examiners was composed of P. C. Fenton, Inspector, Mahanoy City; T. R. Jones, Superintendent, Park Place; William Becker, Miner, Mahanoy City; P. H. Devine, Miner, Shaft P. O.

The following persons passed a satisfactory examination and were granted certificates:

MINE FOREMEN

William Hodgert, William Kirchner, Mahanoy City; Roger Howells, Shenandoah; P. H. Devine, Shaft P. O.

ASSISTANT MINE FOREMEN

Manus J. Boyle, Peter J. Wills, James F. Carr, Mahanoy City; Charles Sucluskié, George Chesna, Joseph A. Miller, Shenandoah.



THIRTEENTH DISTRICT

SCHUYLKILL COUNTY

Shenandoah, Pa., February 19, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: In compliance with the Anthracite Mining Laws, I transmit herewith my annual report of the Thirteenth Anthracite District for the year ending December 31, 1915.

Respectfully submitted,

,
A. B. LAMB,
Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 14 |
| Number of mines, | 30 |
| Number of mines in operation, | 30 |
| Number of tons of coal shipped to market, | 2,738,216 |
| Number of tons used at mines for steam and heat, | 434,324 |
| Number of tons sold to local trade and used by employes, | 54,174 |
| Number of tons produced, | 3,226,714 |
| Number of tons produced by compressed air machines, ..... | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 4,455 |
| Number of persons employed outside, | 2,508 |
| Number of fatal accidents inside of mines, | 28 |
| Number of fatal accidents outside, | 2 |
| Number of non-fatal accidents inside of mines, | 42 |
| Number of non-fatal accidents outside, | 3 |
| Number of tons of coal produced per fatal accident inside, | 115,240 |
| Number of tons produced per fatal accident outside, .. | 1,613,357 |
| Number of tons produced per fatal accident inside and outside, | 107,557 |
| Number of persons employed per fatal accident inside, .. | 159 |
| Number of persons employed per fatal accident outside, .. | 1,254 |
| Number of persons employed per fatal accident inside and outside, | 232 |
| Number of persons employed per non-fatal accident inside, | 106 |
| Number of persons employed per non-fatal accident outside, | 836 |
| Number of persons employed per non-fatal accident inside and outside, | 155 |
| Number of wives made widows, | 18 |
| Number of children made orphans, | 46 |
| Number of steam locomotives used inside of mines, .. | ..... |
| Number of steam locomotives used outside, | 45 |
| Number of compressed air locomotives used inside, | 7 |
| Number of compressed air locomotives used outside, .. | ..... |
| Number of electric motors used inside, | 13 |
| Number of electric motors used outside, | 1 |
| Number of gasoline locomotives used inside, ..... | ..... |
| Number of fans in use, | 27 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 24 |
| Number of non-gaseous mines in operation, | 6 |
| Number of new mines opened, ..... | ..... |
| Number of old mines abandoned, | 2 |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|--|------------------|
| Philadelphia and Reading Coal and Iron Company, .. | 1,668,998 |
| Thomas Colliery Company, | 366,827 |
| Locust Mountain Coal Company, | 336,942 |
| Harleigh Brookwood Coal Company, | 335,680 |
| Susquehanna Coal Company, | 324,483 |
| Cambridge Coal Company, | 103,729 |
| H. H. Smith and Company, | 90,055 |
| Total, | <u>3,226,714</u> |

Production by Counties

| | |
|-------------------|------------------|
| Schuylkill, | <u>3,226,714</u> |
|-------------------|------------------|

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|---|-----------------|---------|--------|---------------------|---------|--------|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Total | Outside | Inside | Total | Outside | Inside | | | | | | | | |
| Philadelphia and Reading Coal and Iron Co., | 22 | ..... | ..... | 20 | ..... | ..... | 55,864 | 2,870 | 1,308 | 4,178 | 130 | ..... | 143 | 436 |
| Thomas Colliery Co., | 3 | ..... | ..... | 3 | ..... | ..... | 132,276 | 390 | 290 | 680 | 98 | ..... | 56 | ..... |
| Loonst Mountain Coal Co., | 2 | ..... | ..... | 7 | ..... | ..... | 48,135 | 389 | 266 | 655 | 194 | ..... | 36 | ..... |
| Harleigh Brookwood Coal Co., | 1 | ..... | ..... | 15 | ..... | ..... | 29,379 | 545 | 310 | 855 | 545 | ..... | ..... | ..... |
| Miscellaneous Companies, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 356 | 354 | 690 | ..... | ..... | ..... | ..... |
| Totals and averages, | 28 | 91 | 30 | 45 | 3 | 42 | 115,240 | 4,455 | 2,508 | 6,963 | 159 | 1,254 | 106 | 836 |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | | | | 1 | 1 | 1 | | | 1 | | 1 | 1 | 6 | 21.43 |
| Falls of slate, | | | | | 1 | | | | | | 1 | 1 | 2 | 7.15 |
| Falls of roof, | | | | | | | 1 | | | | 1 | 1 | 2 | 21.43 |
| Mine cars, | | | | 2 | 1 | | | 1 | | | 1 | 1 | 6 | 21.43 |
| Explosions of gas, | | | | | | | | | 1 | | 1 | 1 | 1 | 3.57 |
| Suffocation by gas, etc., | | | | | | | | | | | 1 | | 1 | 3.57 |
| Explosions of powder and dynamite, | | | | | | | | 1 | | | | | 1 | 3.57 |
| Blasts, premature and otherwise, | | | 1 | | | | | | | | | | 1 | 3.57 |
| Falling into slopes, etc., | | | | | | | | | | | 1 | | 1 | 3.57 |
| Struck leg against sheet iron, | | | | | | | | | | | 1 | | 1 | 3.57 |
| Struck by timber, | | | | | 1 | | | | | | | | 1 | 3.57 |
| Drowned, | 1 | | | | | | | | | | | | 1 | 3.57 |
| Totals, | 1 | | 1 | 3 | 4 | 1 | 1 | 4 | 1 | | 9 | 3 | 28 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Electricity, | | | | | | | 1 | | | | | | 1 | 50.00 |
| Caught by rope, | | 1 | | | | | | | | | | | 1 | 50.00 |
| Totals, | | 1 | | | | | 1 | | | | | | 2 | 100.00 |
| Grand totals inside and outside, | 1 | 1 | 1 | 3 | 4 | 1 | 2 | 4 | 1 | | 9 | 3 | 30 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | 1 | 1 | ..... | ..... | ..... | ..... | 2 | ..... | ..... | 1 | 1 | ..... | 6 | 14.28 |
| Falls of slate, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | 2.38 |
| Falls of roof, | 1 | ..... | ..... | ..... | 1 | 2 | ..... | ..... | ..... | 1 | ..... | ..... | 5 | 11.91 |
| Mine cars, | 1 | 2 | ..... | ..... | ..... | ..... | 1 | 1 | 1 | ..... | ..... | ..... | 6 | 19.05 |
| Explosions of gas, | 1 | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | 2 | ..... | ..... | 7 | 21.43 |
| Struck by rail, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ..... | ..... | 2 | 2.38 |
| Struck by timber, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | 4.76 |
| Falling down chute, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2.38 |
| Rush of coal, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ..... | 2 | 1 | ..... | 5 | 11.91 |
| Mules, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 | 2.38 |
| Rush of rock, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2.38 |
| Injured by axe, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2.38 |
| Struck by platform, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2.38 |
| Totals, | 4 | 3 | 1 | 5 | 2 | 3 | 5 | 3 | 1 | 8 | 4 | 3 | 42 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 66.67 |
| Struck by piece of rock, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | 33.33 |
| Totals, ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | 1 | ..... | ..... | 3 | 100.00 |
| Grand totals inside and outside, | 4 | 3 | 1 | 5 | 3 | 4 | 5 | 3 | 1 | 9 | 4 | 3 | 45 | ..... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, | 1 | ..... | 1 | 1 | 3 | 1 | 1 | 3 | 1 | ..... | 6 | 2 | 20 |
| Miners' laborers, ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | ..... | 3 | ..... | 5 |
| Drivers and runners, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 |
| Machine runners, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 |
| Bottommen, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 |
| Trackmen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, | 1 | ..... | 1 | 3 | 4 | 1 | 1 | 4 | 1 | ..... | 9 | 3 | 28 |
| Outside | | | | | | | | | | | | | |
| Foremen, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Blacksmiths and carpenters, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 2 |
| Grand totals inside and outside, | 1 | 1 | 1 | 3 | 4 | 1 | 2 | 4 | 1 | ... | 9 | 3 | 30 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Fire bosses and assistants, .. | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | 2 |
| Miners, | 2 | 1 | ..... | 3 | 1 | 1 | 1 | 1 | ..... | 5 | 3 | 2 | 21 |
| Miners' laborers, ..... | ..... | ..... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | ..... | 11 |
| Drivers and runners, | 1 | 1 | ..... | 1 | ..... | ..... | 1 | ..... | ..... | ..... | 1 | ..... | 6 |
| Night bosses, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Chargemen, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Totals, | 4 | 3 | 1 | 5 | 2 | 3 | 5 | 3 | 1 | 8 | 4 | 3 | 42 |
| Outside | | | | | | | | | | | | | |
| Blacksmiths and carpenters, .. | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | 1 | ..... | ..... | 1 |
| Laborers, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| Totals, ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | 1 | ..... | ..... | 3 |
| Grand totals inside and outside, | 4 | 3 | 1 | 5 | 3 | 4 | 5 | 3 | 1 | 9 | 4 | 3 | 45 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|--------|----------|----------|---------|-----------|--------|------|------|-----|-------|-------|----------|
| | Totals | December | November | October | September | August | July | June | May | April | March | February |
| American, | 4 | ... | 2 | ... | ... | ... | 1 | ... | ... | ... | 1 | ... |
| English, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... |
| Welsh, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... |
| German, | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... |
| Polish, | 5 | ... | 2 | ... | ... | ... | 1 | 1 | 3 | 1 | ... | ... |
| Lithuanian, | 13 | 3 | 4 | ... | 1 | 1 | ... | ... | ... | ... | ... | 1 |
| Greek, | 2 | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Totals, | 30 | 9 | 9 | ... | 1 | 4 | 2 | 1 | 4 | 3 | 1 | 1 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|--------|----------|----------|---------|-----------|--------|------|------|-----|-------|-------|----------|
| | Totals | December | November | October | September | August | July | June | May | April | March | February |
| American, | 10 | ... | 1 | 3 | ... | ... | 2 | ... | 1 | 1 | ... | 1 |
| Irish, | 2 | ... | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... |
| Polish, | 13 | 1 | 2 | 4 | 1 | 1 | 1 | ... | ... | 3 | ... | ... |
| Hungarian, | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... |
| Italian, | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 |
| Slavonian, | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... |
| Lithuanian, | 12 | 2 | ... | 2 | ... | 1 | 1 | 2 | 1 | 1 | ... | 1 |
| Austrian, | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Greek, | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... |
| Syrian, | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... |
| Totals, | 45 | 2 | 4 | 9 | 1 | 3 | 5 | 4 | 3 | 5 | 1 | 3 |

| Colliery | Slope, ... | Gaseous, ... | Fan, ... | 21 | 7 | 6 | 74 | 1-8 | Guibal, ... | Steam, ... | 10 | 155,700 | 103,900 | 165,100 | 245 |
|----------------------------------|-------------|--------------|--------------|-----|-----|-----|-----|-----|---------------|------------------|-----|---------|---------|---------|-----|
| Gilberton Colliery: | | | | | | | | | | | | | | | |
| Gilberton, No. 1 Skid- | Slope, ... | Gaseous, ... | Fan, ... | ... | ... | ... | ... | ... | ... | ... | ... | 10,500 | 7,200 | 12,000 | 23 |
| Gilberton, No. 1 Skid- | Slope, ... | Gaseous, ... | Natural, ... | ... | ... | ... | ... | ... | ... | ... | ... | 7,621 | 5,640 | 8,120 | 25 |
| Gilberton, No. 2 Skid- | Slope, ... | Gaseous, ... | Natural, ... | ... | ... | ... | ... | ... | ... | ... | ... | 11,000 | 8,000 | 12,000 | 32 |
| Gilberton, No. 3 Skid- | Slope, ... | Gaseous, ... | Natural, ... | ... | ... | ... | ... | ... | ... | ... | ... | 8,742 | 71,900 | 1,040 | 20 |
| Gilberton, Seven foot, | Slope, ... | Gaseous, ... | Natural, ... | ... | ... | ... | ... | ... | ... | ... | ... | 110,745 | 98,075 | 116,915 | 172 |
| Draper Colliery: | | | | | | | | | | | | | | | |
| Draper, ... | Shaft, ... | Gaseous, ... | Fan, ... | 18 | 6.6 | 6 | 80 | 1-8 | Guibal, ... | Steam, ... | 12 | | | | |
| Knickerbocker Colliery: | | | | | | | | | | | | | | | |
| Knickerbocker, ... | Slope, ... | Gaseous, ... | Fan, ... | 13 | 6.6 | 6 | 92 | 1-8 | Guibal, ... | Steam, ... | 10 | 60,327 | 53,900 | 65,790 | 123 |
| Boston Run Colliery: | | | | | | | | | | | | | | | |
| Boston Run, ... | Slope, ... | Gaseous, ... | Fan, ... | 21 | 7 | 6.5 | 86 | 1-8 | Guibal, ... | Steam, ... | 9 | 62,760 | 37,840 | 63,470 | 88 |
| Thomas Colliery Co. | | | | | | | | | | | | | | | |
| Kelley Run Colliery: | | | | | | | | | | | | | | | |
| Kelley Run Main, ... | Slope, ... | Gaseous, ... | Fan, ... | 16 | 6 | 5 | 90 | 1-5 | Guibal, ... | Steam, ... | 10 | 88,480 | 72,005 | 89,135 | 262 |
| Kelley Run No. 3, ... | Slope, ... | Gaseous, ... | Fan, ... | 8 | 4 | 3 | 150 | 1-6 | Blackman, ... | Steam, ... | 6 | 23,300 | 22,500 | 29,920 | 50 |
| Kelley Run No. 4, ... | Slope, ... | Gaseous, ... | Natural, ... | ... | ... | ... | ... | ... | ... | ... | 1 | 7,465 | 4,120 | 7,045 | 3 |
| Lowest Mountain Coal Co. | | | | | | | | | | | | | | | |
| Weston Colliery: | | | | | | | | | | | | | | | |
| Weston, ... | Tunnel, ... | Non-gas, ... | Fan, ... | 5.1 | 2.5 | 12 | 580 | .8 | Stine, ... | Electricity, ... | 2 | 50,000 | 50,000 | 55,000 | 389 |
| Harleigh Brookwood Coal Co. | | | | | | | | | | | | | | | |
| Lawrence and Stanton Collieries: | | | | | | | | | | | | | | | |
| Stanton Nos. 1 and 2 | | | | | | | | | | | | | | | |
| Buck, ... | Slope, ... | Gaseous, ... | Fan, ... | 15 | 4 | 4.8 | 85 | 2 | Guibal, ... | Steam, ... | 2 | 28,500 | 26,000 | 29,000 | 43 |
| Stanton, ... | Slope, ... | Gaseous, ... | Fan, ... | 13 | 4 | 4.8 | 65 | 1 | Guibal, ... | Steam, ... | 2 | 11,000 | 10,000 | 13,000 | 130 |
| Stanton, Four Foot, ... | Slope, ... | Gaseous, ... | Fan, ... | 12 | 5 | 3.3 | 55 | 1 | Guilroy, ... | Steam, ... | 2 | 26,000 | 26,000 | 40,000 | 364 |
| Stanton, Seven Foot, ... | Slope, ... | Gaseous, ... | Fan, ... | 20 | 8 | 3.3 | 75 | 1 | Vulcan, ... | Steam, ... | 6 | 75,000 | 75,000 | 80,000 | 350 |
| Susquehanna Coal Co. | | | | | | | | | | | | | | | |
| William Penn Colliery: | | | | | | | | | | | | | | | |
| William Penn, ... | Shaft, ... | Gaseous, ... | Fan, ... | 18 | 4 | 6 | 100 | 2.5 | Guibal, ... | Steam, ... | 4 | 60,830 | 60,830 | 65,000 | 381 |
| William Penn, ... | Shaft, ... | Non-gas, ... | Fan, ... | 13 | 4 | 6 | 90 | 2.4 | Guibal, ... | Steam, ... | 3 | 46,495 | 46,495 | 61,000 | 381 |
| William Penn, ... | Shaft, ... | Non-gas, ... | Fan, ... | 12 | 5.6 | 7 | 50 | 1.4 | Vulcan, ... | Steam, ... | 2 | 31,540 | 31,540 | 32,000 | 381 |

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|---|---------------------|--------------------------------|---------------------|--|--|----------------------------|
| Philadelphia and Reading Coal and Iron Co. Indiana Ridge Shenandoah City West Shenandoah Kobinor Turkey Run, | { Schuylkill..... } | E. E. Kaercher, | Pottsville, | J. B. Garner, Division Supt. Louis Lorenz, Inside District Supt. A. D. Gable, Outside Division Supt. Morgan Bevan, Division Supt. John Dalley, Inside District Supt. W. J. Brown, Outside Division Supt. J. H. Rollard, Division Supt. J. P. McDonald, District Supt. J. H. Pollard, Division Supt. W. H. Richards, Inside District Supt. F. B. Dawson, Outside District Supt. | Shenandoah, Shenandoah, Shenandoah, Ashland, Gilberton, Ashland, Mahanoy City, St. Nicholas, Mahanoy City, | P. and R. |
| Gilberton, Draper, | | G. B. Hadesty, | Pottsville, | | | P. and R. |
| Knickerbocker, | | E. E. Kaercher, | Pottsville, | | | P. and R. |
| Boston Run, | | E. E. Kaercher, | Pottsville, | | | P. and R. |
| Plank Ridge Washery,* Thomas Colliery Co. Kedley Run Black Creek Washery, | | W. G. Thomas, | Pottsville, | John Price, F. L. Kling, | Shenandoah, Shenandoah, | P. and R. Lehigh Valley |
| Locust Mountain Coal Co. Weston, | Schuylkill..... | T. M. Dodson, | Bethlehem, | B. H. Stockett, | Shenandoah, | L. V. and P. R. R. |
| Harleigh Brookwood Coal Co. Stanton, Lawrence, | { Schuylkill..... } | W. G. Thomas, | Pottsville, | John Price, | Shenandoah, | P. and R. |
| Susquehanna Coal Co. William Penn, | | Robert A. Quin, | Wilkes-Barre, | E. A. Van Horn, | Shaft, | Pennsylvania |
| Cambridge Coal Co. Cambridge Washery, | Schuylkill..... | D. R. James, | Shenandoah, | D. R. James, | Shenandoah, | P. and R. |
| H. H. Smith and Co. Hudson Washery, | Schuylkill..... | H. H. Lineaweaver, ... | Philadelphia, | Godfrey Laudeman, ... | Pottsville, | P. and R. |

*Idle.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | |
|--|-------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used |
| Philadelphia and Reading Coal and Iron Co. | | | | | | | | | | | | |
| Indian Ridge, | Schuylkill, | 147,785 | 20,220 | ..... | 168,005 | 208 | 358 | 5 | 2 | 36,025 | 47,262 | ..... |
| Shenandoah City, | | 187,246 | 43,119 | 36,947 | 267,312 | 208 | 746 | 1 | 4 | 13,875 | 30,418 | 23,703 |
| West Shenandoah, | | 396,533 | 64,128 | ..... | 460,661 | ..... | 566 | 2 | 4 | 12,500 | 16,481 | 23,312 |
| Collieries, ..... |  | ..... | 9,646 | ..... | 9,646 | 209 | 213 | 1 | 3 | 19,175 | 21,825 | 22 |
| Thompson, ..... |  | ..... | ..... | ..... | ..... | ..... | 451 | 1 | 3 | 21,300 | 32,020 | ..... |
| Gilberton, | | 149,536 | 65,510 | 6,150 | 221,225 | 917 | 641 | 1 | 3 | 5,960 | 136,098 | 41 |
| Draper, | | 143,301 | 27,457 | 4 | 223,763 | 218 | 332 | 1 | 4 | 1,625 | 109,150 | 49 |
| Knickerbocker, | | 116,836 | 20,961 | ..... | 137,797 | 214 | 377 | ..... | ..... | 1,460 | 34,572 | 32 |
| Boston Run, | | 142,107 | 41,483 | ..... | 183,590 | 223 | 364 | 1 | ..... | ..... | 90,075 | 42 |
| Totals, | | 1,333,324 | 292,563 | 43,101 | 1,668,938 | ..... | 4,178 | 22 | 23 | 111,850 | 508,921 | 333 |
| Thomas Colliery Co. | | | | | | | | | | | | |
| Kelly Run, | Schuylkill, | 249,891 | 18,570 | 7,606 | 276,067 | 263 | 500 | 3 | ..... | 109,350 | 46,936 | 40 |
| Black Creek Washery, | | 37,650 | 3,130 | ..... | 90,760 | 102 | 85 | ..... | ..... | 300 | ..... | 2 |
| Totals, | | 337,521 | 21,700 | 7,606 | 366,827 | ..... | 585 | 3 | ..... | 109,350 | 47,236 | 42 |
| Locust Mountain Coal Co. | | | | | | | | | | | | |
| Weston, | Schuylkill, | 332,342 | 4,145 | 455 | 336,942 | 240 | 655 | 3 | 7 | 251,280 | ..... | 1 |
| Harleigh Brookwood Coal Co. | | | | | | | | | | | | |
| Stanton, | Schuylkill, | 170,930 | 10,130 | ..... | 181,060 | 248 | 300 | 2 | 10 | ..... | 103,296 | 1,000 |
| Lawrence, | | 103,350 | 51,270 | ..... | 154,620 | 174 | 555 | ..... | 5 | ..... | 94,412 | 28 |
| Totals, | | 274,280 | 61,400 | ..... | 335,680 | ..... | 855 | 2 | 15 | ..... | 197,708 | 1,000 |

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | | Locomotives | | | | Total horse power | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors |
|---|-----------------|-------------------|-------------|---------|-------------|-------------------|-------------|-------|-------|----------|-------------------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Air | Electric | | | | | | | | |
| Philadelphia and Reading Coal and Iron Co., | Schuylkill, ... | ..... | ..... | 117 | 14,950 | 14,950 | ..... | 18 | 7 | 8 | ..... | 245 | 31,334 | 21 | 31,411 | 9,427 | 3 | 4 |
| Thomas Colliery Co., ..... |  | ..... | ..... | 18 | 2,700 | 2,700 | ..... | 10 | ..... | ..... | ..... | 14 | 1,463 | 4 | 5,000 | 4,700 | ..... | 1 |
| Locust Mountain Coal Co., ..... |  | ..... | ..... | 3 | 140 | 140 | ..... | 11 | ..... | 4 | ..... | 12 | 1,280 | ..... | ..... | ..... | ..... | ..... |
| Hartley Brookwood Coal Co., ..... |  | ..... | ..... | 10 | 2,700 | 2,700 | ..... | 4 | ..... | 2 | ..... | 17 | 3,850 | ..... | 6,000 | 2,400 | ..... | ..... |
| Susquehanna Coal Co., ..... |  | ..... | ..... | 15 | 2,300 | 2,300 | ..... | 1 | ..... | ..... | ..... | 21 | 1,620 | 1 | 1,700 | 917 | ..... | 1 |
| Cambridge Coal Co., ..... |  | ..... | ..... | 4 | 500 | 500 | ..... | ..... | ..... | ..... | ..... | 7 | 300 | ..... | ..... | ..... | ..... | ..... |
| H. H. Smith and Co., ..... |  | ..... | ..... | ..... | 500 | 500 | ..... | ..... | ..... | ..... | ..... | 7 | 244 | ..... | ..... | ..... | ..... | ..... |
| Totals, ..... | ..... | ..... | ..... | 171 | 23,790 | 23,790 | ..... | 45 | 7 | 14 | ..... | 323 | 40,091 | 28 | 44,111 | 17,444 | 3 | 10 |

TABLE 3.—Number of each class of employees inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | Outside | | | | | | | | | | Grand total | |
|---|-------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|---------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|---------------------|---------------|-------------|--|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employees | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | Bookkeepers and clerks | All other employees | Total outside | | |
| Philadelphia and Reading Coal and Iron Co., | Schuylkill. | 9 | 74 | 3 | 810 | 747 | 139 | 18 | 17 | 293 | 763 | 2,870 | ... | 12 | 52 | 233 | 140 | 70 | 34 | 767 | 1,308 | 4,178 | |
| Thomas Colliery Co., | | 1 | 2 | 4 | 163 | 61 | 11 | 3 | 5 | 5 | 41 | 295 | 2 | 3 | 24 | 21 | 54 | 12 | 5 | 169 | 290 | 585 | |
| Loonist Mountain Coal Co., | | 1 | ... | ... | 96 | 133 | 10 | 1 | ... | 84 | ... | 389 | 1 | 2 | 22 | 13 | 32 | 14 | 5 | 177 | 266 | 655 | |
| Harleigh Brookwood Coal Co., | | 2 | ... | ... | 275 | 113 | 37 | ... | 8 | 97 | ... | 545 | 1 | 2 | 22 | 34 | 57 | 20 | 3 | 171 | 310 | 855 | |
| Sauquehanna Coal Co., | | 1 | 1 | 11 | 117 | 87 | 36 | 2 | 7 | 9 | 85 | 356 | 1 | 2 | 29 | 26 | 16 | 25 | 8 | 110 | 217 | 573 | |
| Cambridge Coal Co., | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 4 | 10 | 15 | 2 | 2 | 41 | 76 | |
| H. H. Smith and Co., | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 6 | ... | ... | ... | 28 | 41 | 76 | |
| Totals, | | 14 | 79 | 29 | 1,461 | 1,201 | 233 | 24 | 37 | 438 | 889 | 4,455 | 7 | 23 | 155 | 343 | 314 | 145 | 58 | 1,463 | 2,508 | 6,963 | |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|-------------------------|---------------|----------------|-----|-------------------|------------------|-------------------|-------------------|--------------|--|
| Jan. 25 | John Kripples, | Lithuanian, | Miner, | 57 | M. | 1 | 2 | Kohinoor, | Schenckkill, | Drowned. He was reopening a water course and failed to notice warning to retreat, and the water broke and drowned him. Killed by being caught by loose rope and pulled around shaft. He was guiding a hemp rope that was being wound on a shaft and failed to heed the warning of those around him. Outside. |
| Feb. 11 | Peter Klitch, | American, .. | Foreman, | 52 | M. | 1 | 5 | Weston, | | Killed by being struck by flying coal from blast. He attempted to fire three holes at one time and before he left the face of the blast he was pulled out. |
| March 22 | George Tregea, | Welsh, | Miner, | 43 | M. | 1 | 5 | Boston Run, .. | | Killed by car. He was pulling a loaded car on turnout and failed to spring it in time and the car ran down to the other end of turnout and caught him against an empty car at casting. |
| April 12 | Joseph Bendrick, | Lithuanian, | Driver, | 19 | S. | .... | .... | Stanton, | | Killed by fall of coal at face of breast. |
| 24 | Joseph Cupstifus, | Polish, | Miner, | 45 | S. | .... | .... | Weston, | | Killed by being crushed by cars. He for- |
| 27 | Joseph Bradshaw, .. | English, ... | Trackman, | 60 | M. | .... | .... | Kehley Run, .. | | got a trip of cars was being run down a slight grade. |
| May 4 | William Pavsvolsky, .. | Polish, | Miner, | 36 | M. | 1 | 1 | Kohinoor, | | Killed. While standing in a car helping to lift a long prop into place his feet slipped, and the prop fell and crushed his head against the face of breast. |
| 7 | Anthony Pitchalitus, .. | Lithuanian, | Miner, | 23 | S. | .... | .... | Gilberton, | | Killed by fall of coal at face of breast. |
| 13 | Charles Schlack, | Lithuanian, | Driver, | 25 | S. | .... | .... | Indian Ridge, .. | | Killed by being crushed by car. He was riding on front bumper of car and fell on track. |
| June 19 | John Seebrisky, | Lithuanian, | Miner, | 39 | M. | 1 | 2 | Knickerbocker, .. | | Killed by fall of slate at face of breast. |
| 24 | Peter Sheva, | Polish, | Miner, | 35 | S. | .... | .... | Indian Ridge, .. | Schenckkill, | Killed by fall of coal at face of breast. Electrocuted. He was working in the breaker and climbed out on the timbers of a trestle crossing the main team road and came in contact with a high power wire belonging to the traction company. Outside. |
| July 16 | Howard Blank, | American, .. | Carpenter, ... | 36 | M. | 1 | 4 | Stanton, | | |

| | | | | | | | | | |
|--------------|---------|--|----------------|--------------------|----------|----------|----------------|----------------------------------|--|
| July Aug. | 27 6 | Alex Dubitsky, | Polish, | Miner, | 29 26 | S. S. | ..... ..... | Turkey Run, .. Boston Run, .. | Killed by fall of rock at face of breast. To replace an empty car on track on slope by pulling it on with engine. The engineer warned them to get out of the way as he intended to put on extra steam, but instead of going down the slope they went up in front of the car, and when the car started it plunged into them, killing him and injuring the fire boss. |
| | 7 10 | George Simevavage, .. George Arnavage, .. | Polish, | Miner, | 31 31 | M. M. | 1 1 | Draper, | Killed by fall of rock at face of breast. Instantly killed by explosion of dynamite on gangway. |
| | 11 | Joseph Zurelskie, | Lithuanian, .. | Miner, | 38 | S. | ..... | Draper, | Killed by fall of roof at face of pillar. He failed to put in props. |
| Sept. | 27 | Simon Roidlon, | Lithuanian, .. | Miner, | 34 | S. | ..... | Knickerbocker, .. | Killed by fall of coal at face of pillar. |
| Nov. | 3 | Edward Mort, | American, .. | Miner, | 29 | M. | 1 | West Shuman doah. | Killed by falling down manway. |
| | 8 | Anthony Kopotchess, .. | Lithuanian, .. | Miner, | 23 | S. | ..... | Draper, | Burned by gas. He went to face of breast with naked light against warning by cars. He was riding up a slope with slight pitch and in some unknown way fell out of car. |
| | 10 | Harry Youmitskie, .. | Greek, | Laborer, | 28 | M. | 1 | Kohinoor, | Killed by fall of slate at face of breast. He had been told to pull it down. |
| | 13 | Michael Denches, | Lithuanian, .. | Miner, | 55 | M. | 1 | Indian Ridge, .. | Fatally injured. He scratched his leg by bumping it against a piece of sheet iron and died in hospital December 22, from blood poison. |
| | 19 | Charles Yonsholis, .. | Polish, | Miner, | 46 | M. | 1 | West Shuman doah. | Skull fractured. The bottommen were placing a car on the cage and when the car was half on the engineer started the cage without giving a signal, and the car was thrown over the gangway and struck Miller on the head. |
| | 22 | Joseph Miller, | Lithuanian, .. | Bottomman, .. | 20 | S. | ..... | Draper, | Smothered. They were driving through old breasts in a counter gangway, on heavy pitch, and a prop pushed out and caught his leg, and fine coal and dirt ran out and smothered him. The miner ran for help, but Bushlinskie died before he could be rescued. |
| | 23 | George Bushlinskie, .. | Lithuanian, .. | Laborer, | 40 | M. | 1 | Draper, | Fatally injured by fall of coal at face of breast. |
| | 27 | Albert Brown, | American, .. | Miner, | 45 | M. | 1 | Kehley Run, .. | Killed by fall of rock at face of breast. |
| Dec. | 4 | Anthony Folcofsky, .. | Polish, | Miner, | 50 | M. | 1 | Kehley Run, .. | Killed by fall of rock at face of breast. The fire boss told the miners to pull down a dangerous piece of rock or place props under it to make it safe, but they failed to do so and the rock fell an hour afterwards. |
| | | Michael Urvan, | Greek, | Machine runner, .. | 28 | M. | 1 | Weston, | |

Schuykill.

TABLE 4. —Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|--------|------------------------|-------------|--------------|-----|-------------------|------------------|-------------------|------------------|----------------|--|
| Dec. 7 | Enock Petrofsky, | Lithuanian, | Miner, | 39 | M. | 1 | 2 | Shenandoah City. | Schuylkill, .. | Killed by fall of rock. He was laying sheet iron into a pillar and he knocked out two props to make room for it, and the rock fell on him. |
| 30 | Sylvester Ambrozis, .. | Lithuanian, | Miner, | 29 | M. | 1 | 2 | Indian Ridge... | | |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|------------------------|----------------|-------------------|-----|-------------------|------------------------|-------------|---|
| Jan. 18 | Thomas Stanton, ... | American, .. | Driver, | 13 | S. | Gilberton, | Schuylkill. | Leg fractured. He neglected to fix the latches and car ran on wrong track and crushed him against loaded trip. |
| | Joseph Florintine, ... | Italian, | Miner, | 22 | S. | Lawrence, | | Face and hands burned by gas. There was gas in the face of chute and he turned an air hose up and blew the gas down on his naked light. |
| 20 | John Deriscavage, ... | Lithuanian, .. | Miner, | 38 | M. | Turkey Run, | | Legs fractured by fall of coal. |
| Feb. 17 | Nicholas Tychan, ... | Italian, | Chargeman, .. | 28 | M. | Stanton, | | Right arm fractured by fall of coal. |
| | John Soposky, | Lithuanian, .. | Driver, | 17 | S. | Stanton, | | Instantly disabled by accident. He failed to stop his trip in time and bumped into cars. |
| 22 | George Oates, | American, .. | Night boss, | 50 | M. | Weston, | | Hips and knee bruised. He was riding on the electric motor and the motorman ran into trip of cars. |
| 26 | Anthony Bendinskie, .. | Lithuanian, .. | Miner, | 57 | M. | Stanton, | | Arm fractured by fall of coal. |
| March 9 | Charles Alko, | Greek, | Laborer, | 28 | S. | Stanton, | | Leg fractured. Platform broke down. |
| April 12 | George Foy, | American, .. | Driver, | 17 | S. | Draper, | | Body bruised. He attempted to jump on car while in motion and slipped and fell under it. |
| 13 | Paul Petrowsky, | Lithuanian, .. | Laborer, | 27 | S. | Stanton, | | Finger cut off while making a wedge. |
| 15 | Joseph Votulick, | Polish, | Miner, | 35 | S. | Shenandoah City, | | Body bruised. While standing on plank starting motor, the plank broke and fell on his head. |
| 21 | { Michael Cossack, ... | Polish, | Miner, | 27 | M. | { West Shenandoah, ... | Schuylkill. | Burned by gas. They opened their safety lamps in presence of gas. |
| May 4 | { Enock Gurtick, ... | Polish, | Miner, | 22 | S. | { Draper, | | Ankles fractured by fall of rock. |
| 8 | Peter Shimkonas, ... | Lithuanian, .. | Miner, | 33 | M. | Weston, | | Skull fractured. Caught by rushing rock in chute. |
| 15 | Michael Alec, | Syrian, | Laborer, | 25 | S. | Gilberton, | | Leg fractured by being caught between bumpers of locomotive when it jumped off the track. He was riding on locomotive. Outside struck by cars. Outside. |
| 5 | Kinzie Romanick, ... | Austrian, .. | Laborer, | 20 | S. | Gilberton, | | Face and hands burned by gas. He turned on the compressed nozzle and blew gas down on his naked light. |
| 8 | Roman Moscolick, ... | Hungarian, .. | Miner, | 40 | M. | Lawrence, | | |

TABLE 5. — Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|--------------------------|-------------------|------------------|-----|-------------------|------------------------|-------------|--|
| June 14 | John Evanches, | Lithuanian, | Laborer, | 21 | S. | Shenandoah City, | | Arm fractured by fall of rock. |
| July 19 | Wassl Chupko, | Austrian, | Laborer, | 22 | M. | Lawrence, | | Face and hands burned by explosion of gas. He used naked light. |
| 2 | Peter Keiper, | American, | Fire boss, | 42 | M. | Stanton, | | Skull fractured. Car jumped from track and crushed him against timber. |
| 7 | Francis Delowery, ... | American, ... | Runner, | 22 | S. | Kohinoor, | | Body bruised and hand lacerated by fall of coal. |
| 9 | John Dunsavage, | Lithuanian, | Miner, | 26 | M. | Draper, | | Ankle dislocated and head and back lacerated by fall of coal. |
| 21 | Adolph Stotsavage, .. | Polish, | Miner, | 23 | S. | Weston, | | Skull fractured. Kicked by mule. |
| 28 | Charles Landone, | Slavonian, ... | Driver, | 23 | S. | Stanton, | | Leg fractured. He was helping to replace a car on track on slope by pulling it on with the engine, when the car jumped to one side and caught him. |
| Aug. 6 | Roger Sherry, | Irish, | Fire boss, | 42 | M. | Boston Run, | | Head and face lacerated. Caught by rush of coal in chute. |
| 23 | Charles Cutschufskie, .. | Lithuanian, | Laborer, | 25 | S. | Weston, | | Head and face lacerated by rush of coal in chute. |
| 23 | Elec. Mutulavage, .. | Polish, | Miner, | 25 | S. | Weston, | | Arm fractured. Crushed by car. |
| Sept. 17 | Alex Yonigage, | Polish, | Laborer, | 23 | S. | Weston, | | Arm fractured and body crushed by rush of coal from rib. |
| Oct. 4 | Frank Chapinsky, .. | Polish, | Miner, | 25 | S. | Weston, | Schuylkill, | Leg fractured. |
| 6 | Raymond Heshner, .. | Polish, | Laborer, | 22 | S. | Turkey Run, | | Leg fractured. Timber rolled on him. |
| 8 | Anthony Mutlavage, .. | Polish, | Laborer, | 21 | S. | West Shenandoah, ... | | Pelvic bone fractured by fall of rock. |
| 15 | Charles Boudin, | American, ... | Miner, | 41 | M. | Stanton, | | Back broken. Struck by falling timber. |
| 20 | Peter Bakomus, | Lithuanian, ... | Laborer, | 29 | S. | Indian Ridge, | | Leg fractured. While working on a conveyor line a piece of rock fell over the side and struck him. Outside. |
| 22 | Con. Fribula, | Lithuanian, | Miner, | 23 | S. | West Shenandoah, ... | | Leg fractured by fall of coal. |
| 27 | Clarence Zerby, | American, ... | Miner, | 25 | S. | Lawrence, | | Burned by gas. He went into gas with naked light. |
| 28 | Dominick Kentuskie, .. | Polish, | Miner, | 34 | M. | Lawrence, | | Burned by gas. He went into gas with naked light. |
| Nov. 6 | Peter Yecan, | Polish, | Miner, | 51 | M. | Indian Ridge, | | Leg fractured by fall of slate. |

| | | | | | | | | | |
|------|----|-----------------------|----------------|----------------|----|----|------------------------|-------|---|
| Nov. | 6 | Peter McCabe, | American, .. | Miner, | 36 | M. | Stanton, ..... | ..... | Ankle crushed. Caught by rush of coal down chute. |
| | 15 | James Ryan, | Irish, | Miner, | 34 | S. | Stanton, ..... | ..... | Foot broken. While men were unloading rails, he stepped in the road and was struck by falling rail. |
| Dec. | 17 | Stiney Suduskie, | Polish, | Laborer, | 35 | M. | Weston, ..... | ..... | Leg fractured by fall of coal. |
| | 7 | Alex Mesonus, | Lithuanian, .. | Miner, | 29 | S. | Shenandoah City, ..... | ..... | Burned by gas which he ignited by lighting a cigarette. |
| | 13 | Joseph Dumbroskie, .. | Polish, | Miner, | 28 | S. | Shenandoah City, ..... | ..... | Burned by gas. He went into gas without safety lamp. |
| | 17 | John Matzunas, | Lithuanian, .. | Driver, | 17 | S. | Draper, ..... | ..... | Foot amputated. While spragging car his foot slipped on rail and was crushed by car. |

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Indian Ridge, Shenandoah City, West Shenandoah, Kohinoor, Turkey Run, Gilberton, Draper, Knickerbocker and Boston Run Collieries.—Ventilation, drainage and condition as to safety, good.

THOMAS COLLIERY COMPANY

Kehley Run Colliery.—Ventilation and condition as to safety, good. Drainage, fair.

LOCUST MOUNTAIN COAL COMPANY

Weston Colliery.—Ventilation and condition as to safety, good. Drainage, fair.

HARLEIGH BROOKWOOD COAL COMPANY

Stanton and Lawrence Collieries.—Ventilation and condition as to safety, good. Drainage, fair.

SUSQUEHANNA COAL COMPANY

William Penn Colliery.—Ventilation, drainage and condition as to safety, good.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Indian Ridge Colliery.—Change in team road in vicinity of No. 7 Primrose slope, 22 feet wide and 2200 feet long. During the year 50,422 cubic yards of slush were run into this mine, or 1,433,318 cubic yards to date.

Shenandoah City Colliery.—Tunnel was driven from Buck Mountain to Seven Foot vein on Shaft Level; length 224 feet.

Car pusher was installed at bottom of shaft.

Safety walk was made for men north of shaft to prevent them from walking along track from shaft to breaker.

During the year 20,782 cubic yards of slush were run into this mine, or 70,366 cubic yards to date.

West Shenandoah Colliery.—Air tunnel was driven from Skidmore to Seven Foot on fifth lift; length 232 feet.

Rock hole was driven from Seven Foot to Skidmore on sixth lift; length 42 feet.

No. 2 Strippings, Buck Mountain vein. Finished mining coal.

Pump room in rock in the sixth lift Buck Mountain gangway was completed and electric pump was installed therein.

Slush elevator erected south of breaker to give additional height for slush bank. During the year 20,082 cubic yards of slush were run into this mine, or 712,416 cubic yards to date.

Kohinoor Colliery.—During the year 60,872 cubic yards of slush were run into this mine, or 1,119,160 cubic yards to date.

Gilberton Colliery.—Tunnel to Buck Mountain vein from the West Seven Foot gangway off the new underground slope in Seven Foot vein 1060 foot level, was completed in March; length 39 yards.

Single and double track tunnel from foot of underground slope from Seven Foot vein, north dip, to Seven Foot vein, south dip, was completed in September; length 40 yards.

Tunnel to Skidmore vein from the West Buck Mountain gangway was completed in July; length 63 1-3 yards. Tunnel to Little Buck vein from East Skidmore gangway (932 foot level) off No. 1 slope at a point 160 feet east of No. 1 slope, was completed in May; length 64 2-3 yards.

Draper Colliery.—Tunnel from Leader gangway to Skidmore vein second lift, was completed in March; length 26 yards.

Three rail rock plane from second lift tunnel to Little Tracey vein, was completed in July; length 26 yards.

Knickerbocker Colliery.—Tunnel to Buck Mountain vein, south dip tunnel from Buck Mountain underground slope, West Seven Foot gangway, north dip, near Breast No. 20, was completed; total length 70 2-3 yards.

Boston Run Colliery.—A rock hole for air on 15 degree pitch to stump heading in Buck Mountain vein, from East Little Buck fourth lift, 115 feet east of pumproom, was completed; total length 15½ yards.

A tunnel on shaft level to tender slope in Little Buck vein, for timberway and men, was completed; total length 64 1-3 yards.

A rock hole on 45 degree pitch to Little Tracey vein from West Tracey gangway second lift at Breast No. 2, was completed; total length 21 1-3 yards.

THOMAS COLLIERY COMPANY

Kehley Run Colliery.—New supply plane hoisting engine was installed and engine house erected. New conveyor line to take in culm bank on west side of breaker was partially installed.

Black Creek Washery.—This is a new operation. During the year a new breaker with a capacity of 1000 tons daily was erected, and in it were installed 12 new jigs, together with shakers and other necessary machinery. Boiler house was erected containing five 150 horse power locomotive type boilers. Installed 5 locomotives—three 20-ton, one 18-ton and one 12-ton.

Installed 3 steam shovels—two 45-ton and one 70-ton.

Installed one breaker wash pump, capacity 1000 gallons per minute.

LOCUST MOUNTAIN COAL COMPANY

Weston Colliery.—Inside: Installed two 8-ton electric locomotives, armor plate type, General Electric Company's construction, 36-inch gauge. The plane to the counter level of the Little Buck Mountain vein for the purpose of handling the coal from the counter, has been

completed; also the tunnel from the Little Buck Mountain vein to the Buck Mountain vein off East Little Buck Mountain counter gangway, opening up two gangways at the spoon of the basin in the Buck Mountain.

The 100-foot tunnel from No. 1 West Little Buck Mountain gangway to the Buck Mountain vein is still being driven.

Outside: A boiler house has been erected at the mouth of the tunnel for the purpose of heating adjacent buildings. A thaw-house, built of lumber and stuccoed on outside, with a capacity of 50 mine cars, has been erected for the purpose of keeping cars from freezing during the severe weather. This building is 300 feet long and 20 feet wide, and it is practically fireproof. An additional mine fan has been installed to ventilate the East Little Buck Mountain counter gangway. It is the Disc type, 7½-15 H. P. motor, capacity 40,000 to 60,000 cubic feet of air per minute, one-inch water gauge.

An office has been added alongside of the loaded car scale for the use of the coal inspector.

Stripping: An electric drag line excavator, Bucyrus 175-B type, weight 255 tons, 3½ cubic yards dipper, length of boom 125 feet, was added to the strippings for the purpose of stripping the Mammoth basin and Buck Mountain crops.

An additional steam locomotive was added for the purpose of handling clay and coal. A new 150 H. P. motor has been installed in the engine house at the head of the letting-down plane from the stripping, to replace a 50 H. P. motor and double the capacity of the plane, bringing it up to 48 cars per hour.

HARLEIGH BROOKWOOD COAL COMPANY

Stanton and Lawrence Collieries.—Installed two 7-ton General Electric locomotives.

A wing tunnel was driven from the main tunnel across the basin to the East Seven Foot gangway, third lift, 640 foot elevation north dip, which is being used in connection with electric haulage. An air tunnel 8 feet by 12 feet and 445 feet long has been driven from the Buck Mountain bed, north dip, to the Four Foot bed, north dip.

Completed tunnel 200 feet long from the Four Foot bed, south dip, to the Mammoth bed, south dip, 640 foot elevation.

Completed tunnel across the basin from Four Foot bed, south dip, to Seven Foot bed, north dip, a distance of 720 feet on the 640 foot elevation. A traveling way on the Skidmore vein was completed from the 920 foot level to the 1000 foot counter level.

A new 14 inch and 26 by 14 by 36 inch Goyne wash water-pump, enclosed in frame house, was installed for the wash water for Lawrence breaker.

A new 20-foot steel fan, reversible type, has been installed just east of the Seven Foot slope. A new air compressor, 1100 cubic foot capacity, has been installed close to the fan for rock-drilling machine. Two new Sterling boilers, 350 H. P. each, are being installed, making a total of eight.

SUSQUEHANNA COAL COMPANY

William Penn Colliery.—Installed new shaking screens in breaker. Breaker coal plane remodeled. Built new lamp house, emergency hospital and office for inside foreman. Empty car hoist remodeled.

Numerous concrete retaining walls erected. The following tunnels were driven: One from East Primrose to Holmes, No. 1 level; one from West Skidmore to Mammoth, No. 1 level; and one from Skidmore to Mammoth, No. 4 level.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in Eagan's Hall, Shenandoah, May 18 and 19. The Board of Examiners was composed of A. B. Lamb, Mine Inspector; E. A. Van Horn, Superintendent, Shaft; George H. Young, Miner, Shenandoah; George Keller, Miner, Ashland.

The following persons passed a satisfactory examination and were granted certificates:

ASSISTANT MINE FOREMEN

John Buscavage, John Rowan, Shenandoah; Clayton Burchill, Frackville; Stanley Jenkins, Shaft, P. O.; William H. Thomas, Gilberton; David J. Price, Ashland.



FOURTEENTH DISTRICT

COLUMBIA, SCHUYLKILL AND NORTHUMBERLAND COUNTIES

Centralia, Pa., February 19, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my report as Inspector of Mines, for the Fourteenth Anthracite District for the year ending December 31, 1915.

Respectfully submitted,

JAMES A. O'DONNELL,
Inspector.

SUMMARY OF STATISTICS

| | |
|--|-----------|
| Number of collieries, | 15 |
| Number of mines, | 39 |
| Number of mines in operation, | 39 |
| Number of tons of coal shipped to market, | 2,325,388 |
| Number of tons used at mines for steam and heat, | 565,126 |
| Number of tons sold to local trade and used by employes, | 56,197 |
| Number of tons produced, | 2,946,711 |
| Number of tons produced by compressed air machines, .. | ..... |
| Number of tons produced by electrical machines, .... | ..... |
| Number of persons employed inside of mines, | 4,403 |
| Number of persons employed outside, | 2,448 |
| Number of fatal accidents inside of mines, | 10 |
| Number of fatal accidents outside, | 6 |
| Number of non-fatal accidents inside of mines, | 46 |
| Number of non-fatal accidents outside, | 13 |
| Number of tons of coal produced per fatal accident in- side, | 294,671 |
| Number of tons produced per fatal accident outside, .. | 491,118 |
| Number of tons produced per fatal accident inside and outside, | 184,169 |
| Number of persons employed per fatal accident inside, .. | 440 |
| Number of persons employed per fatal accident outside, .. | 408 |
| Number of persons employed per fatal accident inside and outside, | 428 |
| Number of persons employed per non-fatal accident in- side, | 96 |
| Number of persons employed per non-fatal accident out- side, | 188 |
| Number of persons employed per non-fatal accident in- side and outside, | 116 |
| Number of wives made widows, | 9 |
| Number of children made orphans, | 28 |
| Number of steam locomotives used inside of mines, .... | ..... |
| Number of steam locomotives used outside, | 47 |
| Number of compressed air locomotives used inside, | 6 |
| Number of compressed air locomotives used outside, ... | ..... |
| Number of electric motors used inside, | 34 |
| Number of electric motors used outside, | 1 |
| Number of gasoline locomotives used inside, | 4 |
| Number of fans in use, | 29 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 28 |
| Number of non-gaseous mines in operation, | 11 |
| Number of new mines opened, ..... | ..... |
| Number of old mines abandoned, ..... | ..... |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|--|-----------|
| Lehigh Valley Coal Company, | 1,604,262 |
| Philadelphia and Reading Coal and Iron Company, | 740,658 |
| Midvalley Coal Company, | 296,902 |
| Girard Mammoth Coal Company, | 194,702 |
| East Bear Ridge Coal Company, | 46,429 |
| Beaver Valley Coal Company, | 35,113 |
| Harleigh Brookwood Coal Company, | 17,073 |
| W. R. McTurk Coal Company, | 11,572 |
| Total, | 2,946,711 |

Production by Counties

| | |
|-----------------------|-----------|
| Schuylkill, | 1,497,998 |
| Columbia, | 1,073,630 |
| Northumberland, | 375,083 |
| Total, | 2,946,711 |

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|---|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| Ledgh Valley Coal Co., | 5 | 4 | 9 | 34 | 9 | 43 | 230,852 | 47,184 | 2,300 | 969 | 3,269 | 460 | 242 | 68 | 108 |
| Philadelphia and Reading Coal and Iron Co., | 3 | 1 | 4 | 5 | 1 | 6 | 246,886 | 148,431 | 1,192 | 664 | 1,856 | 397 | 664 | 238 | 664 |
| Midvalley Coal Co., | 1 | 1 | 2 | 3 | 1 | 4 | 296,902 | 98,967 | 355 | 179 | 514 | 335 | 664 | 111 | 179 |
| Gibard Mammoth Coal Co., | 1 | 1 | 2 | 3 | 1 | 4 | 296,902 | 98,967 | 98 | 290 | 388 | 335 | 260 | 138 | 296 |
| East Bear Ridge Coal Co., | 1 | 1 | 2 | 3 | 1 | 4 | 296,902 | 98,967 | 277 | 110 | 387 | 335 | 260 | 138 | 119 |
| Hardough Brookwood Coal Co., | 1 | 1 | 2 | 3 | 1 | 4 | 17,073 | 23,214 | 66 | 37 | 103 | 66 | 66 | 45 | 119 |
| M. R. McTurk Coal Co., | 1 | 1 | 2 | 3 | 1 | 4 | 17,073 | 23,214 | 90 | 134 | 224 | 66 | 66 | 45 | 119 |
| Miscellaneous Companies, | 1 | 1 | 2 | 3 | 1 | 4 | 17,073 | 23,214 | 46 | 65 | 110 | 66 | 66 | 45 | 119 |
| Totals and averages, | 10 | 6 | 16 | 46 | 13 | 59 | 294,671 | 64,059 | 4,403 | 2,448 | 6,851 | 440 | 408 | 90 | 188 |

Names of Operators

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Percentages | |
|---|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|-------------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | Totals | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | | | | | | | | | 1 | | | | 1 | 10.00 |
| Mine cars, | | 1 | | | | | | | | | | | 1 | 10.00 |
| Explosions of gas, | | | | | | | | | | | | | 2 | 20.00 |
| Suffocation by gas, etc., | | | | | | | | | | | 2 | | 2 | 20.00 |
| Blasts, premature and otherwise, | | | | | | | | | 1 | | | | 1 | 10.00 |
| Falling down chute, .. | | | | | 1 | 1 | | | | | | | 1 | 10.00 |
| Rush of coal, | | | | | 1 | | 1 | | | | | | 2 | 20.00 |
| Totals, | | 1 | | | 1 | 3 | 1 | | 2 | | 2 | | 10 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | 1 | | | | | | | | | | | | 1 | 16.66 |
| Machinery, | | | | | 1 | 1 | | | | | | | 2 | 33.34 |
| Falling, | | | | 1 | | | | | | | | | 1 | 16.67 |
| Rush of earth, | | | | | | | 1 | | | | | | 1 | 16.67 |
| Burned by clothing catching fire, | | | | | | | | | | | | 1 | 1 | 16.66 |
| Totals, | 1 | | | 1 | 1 | 1 | 1 | | | | | 1 | 6 | 100.00 |
| Grand totals inside and outside, | 1 | 1 | | 1 | 2 | 4 | 2 | | 2 | | 2 | 1 | 16 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | | 1 | | 1 | 2 | | | 2 | 2 | 1 | 1 | | 10 | 21.74 |
| Falls of slate, | | | | | | | | | 1 | | | | 1 | 2.17 |
| Falls of roof, | | | 1 | | | 1 | | | | | | | 2 | 4.35 |
| Mine cars, | | | | | | | | | 1 | 2 | | | 6 | 13.05 |
| Explosions of gas, | 1 | | | | | | 1 | 1 | | 1 | | | 12 | 26.09 |
| Blasts, premature and otherwise, | | | | 1 | | 1 | | | 1 | | | | 3 | 6.52 |
| Falling into slopes, etc., | | | | | | | | | | 1 | | | 1 | 2.17 |
| Crushed at batteries, | | | 1 | | | | | | | | | | 1 | 2.17 |
| Machinery, | | | | | | | | | | | 1 | | 1 | 2.17 |
| Struck by piece of iron, | 1 | | | | | | | | | | | | 1 | 2.17 |
| Struck by block, | | 1 | | | | | | | | | | | 1 | 2.17 |
| Scalded by steam, | | | 1 | | | | | | | | | | 1 | 2.17 |
| Falling, | | | | 1 | | | | 1 | | | | | 2 | 4.35 |
| Struck by piece of rock, | | | | 1 | | | | | | | | | 1 | 2.18 |
| Bursting of steam pipe, | | | | | | | | 1 | | | | | 1 | 2.18 |
| Rush of coal, | | | | | | | | | | | | 1 | 1 | 2.18 |
| Struck by timber, | | | | | | | | | | | | 1 | 1 | 2.17 |
| Totals, | 3 | 2 | 3 | 7 | 6 | 5 | 1 | 5 | 5 | 5 | 2 | 2 | 46 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | | | | | 1 | | | | 1 | | | | 2 | 15.39 |
| Machinery, | | | | | 1 | | | | | | | | 1 | 7.70 |
| Falling, | | | | | | | 1 | | | | 1 | | 4 | 30.77 |
| Struck by chain, | | | | | | | | | | | | | 1 | 7.69 |
| Scalded by steam, | | | | | | 1 | | | | | | | 1 | 7.69 |
| Struck by debris, | | | | | | | | 1 | | | | | 1 | 7.69 |
| Struck by rail, | | | | | | | | | | 1 | | | 1 | 7.69 |
| Struck by rock, | | | | | | | | | | | 1 | | 1 | 7.69 |
| Struck by rope, | | | | | | | | | | | | 1 | 1 | 7.69 |
| Totals, | | | | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 13 | 100.00 |
| Grand totals inside and outside, | 3 | 2 | 3 | 9 | 8 | 7 | 2 | 6 | 6 | 6 | 4 | 3 | 59 | ..... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|---|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | ..... | ..... | 1 | ..... | 3 |
| Miners' laborers, ..... | ..... | ..... | ..... | ..... | ..... | 3 | ..... | ..... | ..... | ..... | 1 | ..... | 4 |
| Drivers and runners, ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 2 |
| Machine runners, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 |
| Totals, ..... | ..... | 1 | ..... | ..... | 1 | 3 | 1 | ..... | 2 | ..... | 2 | ..... | 10 |
| Outside | | | | | | | | | | | | | |
| Blacksmiths and carpenters,... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Statepickers (boys), ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Laborers, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Oilers, ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Drillers, ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 |
| Watchmen, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 |
| Totals, | 1 | ..... | ..... | 1 | 1 | 1 | 1 | ..... | ..... | ..... | ..... | 1 | 6 |
| Grand totals inside and out- side, | 1 | 1 | ..... | 1 | 2 | 4 | 2 | ..... | 2 | ..... | 2 | 1 | 16 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, | | 1 | 1 | 4 | 1 | 4 | 1 | 1 | 1 | 4 | 1 | ... | 22 |
| Miners' laborers, | 3 | | | 2 | 3 | | | | 1 | | | | 9 |
| Drivers and runners, | | | | | | | | | 1 | | | | 1 |
| Pumpmen, | | | 1 | | | | | 1 | | | | | 2 |
| Timbermen, | | 1 | | | | | | | | | | | 1 |
| Starters, | | | 1 | | | | | | | | | 1 | 2 |
| Machine runners, | | | | 1 | | | | | 1 | | | | 2 |
| Loaders, | | | | | 1 | | | | 1 | 1 | | 1 | 4 |
| Rockmen, | | | | | | 1 | | | | | | | 1 |
| Blacksmiths, | | | | | | | | | | | 1 | | 1 |
| Motormen, | | | | | 1 | | | | | | | | 1 |
| Totals, | 3 | 2 | 3 | 7 | 6 | 5 | 1 | 5 | 5 | 5 | 2 | 2 | 46 |
| Outside | | | | | | | | | | | | | |
| Foremen, | | | | 1 | | | | | | | | | 1 |
| Engineers and firemen, | | | | 1 | 1 | 1 | | | | | | | 3 |
| Laborers, | | | | | 1 | 1 | 1 | | 1 | 1 | | 1 | 6 |
| Loaders, | | | | | | | | 1 | | | | | 1 |
| Footmen, | | | | | | | | | | | 1 | | 1 |
| Platemens, | | | | | | | | | | | 1 | | 1 |
| Totals, | | | | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 13 |
| Grand totals inside and outside, | 3 | 2 | 3 | 9 | 8 | 7 | 2 | 6 | 6 | 6 | 4 | 3 | 59 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-------------------|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American, | 1 | 1 | .... | .... | 2 | 2 | 1 | .... | 1 | .... | .... | .... | 8 |
| Irish, ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | 1 |
| Italian, ..... | .... | .... | .... | 1 | .... | 1 | .... | .... | .... | .... | .... | .... | 2 |
| Slavonian, ..... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | 1 |
| Lithuanian, ..... | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... | 1 | .... | 1 |
| Austrian, ..... | .... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | 1 | .... | 2 |
| Russian, ..... | .... | .... | .... | .... | .... | 1 | .... | .... | .... | .... | .... | .... | 1 |
| Totals, | 1 | 1 | .... | 1 | 2 | 1 | 2 | .... | 2 | .... | 2 | 1 | 16 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|-------------------|---------|----------|-------|-------|------|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| American, | 1 | 2 | 1 | 3 | 2 | 3 | 1 | 4 | 1 | 1 | 3 | 3 | 25 |
| English, | | | | | 1 | .... | .... | .... | .... | .... | .... | .... | 1 |
| Welsh, | | | | 1 | .... | .... | .... | .... | .... | .... | .... | .... | 1 |
| Irish, | | | | | | | | | | 1 | .... | .... | 1 |
| Polish, | | | | 1 | 1 | 1 | 1 | .... | 1 | .... | .... | .... | 5 |
| Hungarian, | | | | | | 1 | .... | .... | .... | .... | .... | .... | 1 |
| Italian, | | | | 1 | .... | .... | .... | 1 | .... | .... | 1 | .... | 3 |
| Slavonian, | | | | | | | | | 1 | .... | .... | .... | 1 |
| Lithuanian, | | | | 1 | .... | 1 | .... | 1 | 1 | 1 | .... | .... | 5 |
| Austrian, | | | | 1 | 1 | .... | .... | .... | .... | .... | .... | .... | 2 |
| Russian, | | 1 | 1 | 1 | .... | .... | .... | .... | 1 | 1 | .... | .... | 3 |
| Greek, | | | | | | | | | 1 | 2 | .... | .... | 3 |
| Tyrolean, | | | | | | 1 | .... | .... | .... | .... | .... | .... | 1 |
| Totals, | 2 | 2 | 3 | 9 | 8 | 7 | 2 | 6 | 6 | 6 | 4 | 3 | 59 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|--|------------------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|----------------|-----------------|----------------------------------|---|--|--|-----------------------------------|
| Lehigh Valley Coal Co. Columbia Colliery: | Slope..... | Gaseous, .. | Fan, | 15 | 5.10 | 5 | 70 | .6 | Guibal, | Steam, | 6 | 52,000 | 59,000 | 54,000 | 66 |
| | Shaft, | Gaseous, .. | 2 Fans, .. | 30 | 2.6 | 6.8 | 64 | .6 | Guibal, | Steam, | 2 | 24,000 | 32,000 | 24,000 | 48 |
| | Continental, .. | Gaseous, .. | Fan, | 12 | 4.8 | 1.9 | 72 | .6 | Guibal, | Gasoline, | 4 | 21,000 | 21,000 | 21,000 | 49 |
| | Slope..... | Gaseous, .. | Fan, | 16 | 4.8 | 1 | 132 | .6 | Buffalo, | Electricity, .. | 5 | 41,000 | 41,000 | 43,000 | 92 |
| | Logan, | Gaseous, .. | Fan, | 15 | 4 | 3 | 100 | .5 | Guibal, | Electricity, .. | 5 | 33,000 | 33,000 | 35,000 | 61 |
| Sayre Colliery: | Shaft, | Gaseous, .. | Fan, | 20 | 6.8 | 6.1 | 80 | .75 | Guibal, | Steam, | 8 | 42,000 | 42,000 | 44,000 | 81 |
| | Stony No. 3, S. D., .. | Gaseous, .. | Fan, | 16 | 4.8 | 5 | 85 | 1 | Guibal, | Steam, | 10 | 59,000 | 59,000 | 61,200 | 101 |
| | Stony No. 3, N. D., .. | Gaseous, .. | Fan, | 26 | 6.8 | 6.1 | 80 | .75 | Guibal, | Steam, | 9 | 32,000 | 32,000 | 33,500 | 73 |
| | Morris Ridge, | Gaseous, .. | Fan, | 12 | 4.6 | 2.9 | 90 | .5 | Guibal, | Oil, | 3 | 21,000 | 21,000 | 22,300 | 54 |
| | Packer No. 2 Colliery: | Gaseous, .. | Fan, | 20 | 6 | 5.5 | 68 | 1 | Guibal, | Steam, | 7 | 78,000 | 78,000 | 80,600 | 200 |
| Packer No. 3 Colliery: | Slope, | Gaseous, .. | Fan, | 18 | 6.1 | 5.4 | 70 | .6 | Guibal, | Steam, | 10 | 81,000 | 81,000 | 84,000 | 128 |
| | Slope, | Gaseous, .. | Fan, | 20 | 6.9 | 5.11 | 65 | 1 | Guibal, | Steam, | 12 | 89,000 | 89,000 | 91,000 | 190 |
| | Slope, | Gaseous, .. | Fan, | 20 | 6 | 5.6 | 75 | 1.4 | Guibal, | Steam, | 10 | 95,000 | 95,000 | 98,000 | 173 |
| Packer No. 5 Colliery: | Shaft, | Gaseous, .. | Fan, | 15 | 4.1 | 4.7 | 73 | .6 | Guibal, | Steam, | 10 | 115,000 | 115,000 | 117,000 | 159 |
| | Drift, | Gaseous, .. | Fan, | 15 | 4.1 | 4.7 | 73 | .6 | Guibal, | Steam, | 10 | 115,000 | 115,000 | 117,000 | 159 |

| Philadelphia and Reading Coal and Iron Co. | 21 | 7. | 6. | 45 | 2. | Gulbal, | Steam, | 10 | 74,000 | 76,000 | 133 |
|---|-------|-------|-------|-------|-------|----------|--------|-------|---------|---------|-------|
| Hammond Colliery: | 21 | 7. | 6. | 42 | 2. | Gulbal, | Steam, | 6 | 75,000 | 75,500 | 114 |
| Hammond, | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Hammond Nos. 1, 2 and 3, | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Hammond Seven Foot and Top Split, | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| East Colliery: | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| East, | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| East Nos. 2, 5 and 6, .. | 21 | 7. | 6. | 86 | 2.5 | Gulbal, | Steam, | 6 | 78,000 | 80,000 | 112 |
| Potts Colliery: | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Potts Mammoth, | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Potts Primrose, | 18 | 6. | 5. | 74 | 2.2 | Gulbal, | Steam, | 6 | 70,000 | 72,500 | 181 |
| Midvalley Coal Co. | 21 | 7. | 6. | 70 | 1. | Gulbal, | Steam, | 6 | 60,000 | 62,000 | 186 |
| Midvalley Colliery: | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Midvalley No. 4, | 18 | 5.6 | 5. | 75 | 1.3 | Vulcan, | Steam, | 8 | 112,000 | 114,000 | 112 |
| Midvalley No. 4, | 10 | 4.6 | 4.10 | 73 | 1.1 | Vulcan, | Steam, | 6 | 85,000 | 87,000 | 138 |
| Midvalley No. 4, | 15 | 8. | 7. | 68 | 1.4 | Vulcan, | Steam, | 6 | 85,000 | 87,000 | 138 |
| Midvalley No. 5, | 6 | 4.6 | 4.10 | 76 | 1.2 | Vulcan, | Steam, | 1 | 9,000 | 9,000 | 7 |
| Girard Mammoth Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Girard Mammoth Colliery: | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Girard Mammoth, | 8 | 2.10 | 1.10 | 90 | .6 | Buffalo, | Steam, | 2 | 14,000 | 14,000 | 68 |
| East Bear Ridge Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| East Bear Ridge Colliery: | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| East Bear Ridge, | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| East Bear Ridge, | 16 | 5. | 5. | 75 | 1.8 | Gulbal, | Steam, | 4 | 70,000 | 72,000 | 250 |
| Beaver Valley Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Beaver Valley Colliery: | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Swotch Valley Nos. 1 and 2, | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Harleigh Brookwood Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| West Bear Ridge Colliery: | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| West Bear Ridge, | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| W. R. McTurk Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Grand Bear Ridge Colliery: | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Grand Bear Ridge No. 1, | 12 | 4. | 3. | 120 | 1.5 | Gulbal, | Steam, | 3 | 30,000 | 30,500 | 65 |
| Grand Bear Ridge No. 2, | 8 | 2. | 2. | 100 | 1.1 | Gulbal, | Steam, | 1 | 5,000 | 5,500 | 50 |

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|--|--------------------|--------------------------------|---------------------|------------------------|---------------------|------------------|
| Lehigh Valley Coal Co. Centralia, | Columbia, | Thomas Thomas, .. | Wilkes-Barre, | H. J. Heffner, | Centralia, | Lehigh Valley |
| Sayre, | Northumberland, .. | | | | | |
| Packer Nos. 2, 3, 4, 5, ... | Schuylkill, | G. B. Hadesky, | Pottsville, | Morgan Bevan, | Ashland, | P. and R. |
| Philadelphia and Reading Coal and Iron Co. Hammond, | Schuylkill, | | | | | |
| East, | Schuylkill, | T. E. Snyder, | Hazleton, | H. D. Kostenbauder, .. | Wilburton, | Lehigh Valley |
| Potts, | Columbia, | | | | | |
| Midvalley Coal Co. Midvalley, | Columbia, | Timothy Cockill, | Mahanoy City, | William Palmer, | Mahanoy City, | P. and R. |
| Girard Mammoth Coal Co. Girard Mammoth, | Schuylkill, | | | | | |
| East Bear Ridge Coal Co. East Bear Ridge, | Schuylkill, | G. T. Davis, | Scranton, | James H. Pierce, | Frackville, | P. and R. |
| Beaver Valley Coal Co. Scotch Valley, | Columbia, | | | | | |
| Harleigh Brookwood Coal Co. West Bear Ridge, | Schuylkill, | W. G. Thomas, | Pottsville, | George D. Evans, | Mainville, | Pennsylvania |
| W. R. McCurt Coal Co. Girard Bear Ridge, | Schuylkill, | | | | | |
| | | Morton H. McCurt, ... | Girardville, | John Price, | Shenandoah, | P. and R. |
| | | | | | | P. and R. |

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|--|-----------------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Lehigh Valley Coal Co. | | | | | | | | | | | | | |
| Conradia, | Columbia, | 436,378 | 71,830 | 6,128 | 514,326 | 922 | 838 | 2 | 14 | ..... | 230,759 | ..... | 75 |
| Sayre, | Northumberland, | 991,698 | 78,148 | 5,237 | 375,083 | 355 | 715 | 1 | 16 | ..... | 212,746 | ..... | 36 |
| Packer No. 2, | Schuylkill, | 127,681 | 25,594 | ..... | 153,275 | ..... | 589 | ..... | ..... | ..... | 65,905 | ..... | 11 |
| Packer No. 3, | Schuylkill, | 90,563 | ..... | ..... | 90,671 | ..... | 290 | ..... | ..... | ..... | 28,102 | ..... | 12 |
| Packer No. 4, | Schuylkill, | 90,148 | 95,010 | 1,050 | 186,208 | 223 | 498 | 3 | ..... | ..... | 8,550 | ..... | 14 |
| Packer No. 5, | Schuylkill, | 230,517 | 54,182 | ..... | 284,699 | 178 | 737 | 2 | 7 | ..... | 4,625 | ..... | 23 |
| Totals, ..... | ..... | 1,267,015 | 324,822 | 12,415 | 1,604,262 | ..... | 3,269 | 9 | 43 | 26,660 | 735,622 | ..... | 181 |
| Philadelphia and Reading Coal and Iron Co. | | | | | | | | | | | | | |
| Hammond, | Schuylkill, | 211,476 | 60,709 | 19,282 | 281,477 | 216 | 730 | ..... | 3 | ..... | 90,351 | 58,515 | 29 |
| East, | Schuylkill, | 155,912 | 55,331 | 10,649 | 221,892 | 293 | 588 | 2 | ..... | ..... | 101,560 | 19,950 | 74 |
| Totts, | Columbia, | 189,185 | 40,195 | 6,909 | 227,288 | 254 | 538 | ..... | ..... | ..... | 55,483 | 48,807 | 70 |
| Totals, ..... | ..... | 547,573 | 156,235 | 36,850 | 740,658 | ..... | 1,856 | 4 | 6 | ..... | 247,404 | 127,272 | 173 |
| Midvalley Coal Co. | | | | | | | | | | | | | |
| Midvalley, | Columbia, | 255,566 | 38,189 | 3,147 | 286,902 | 227 | 514 | 1 | 4 | 23,725 | 155,175 | ..... | 50 |
| Girard Mammoth Coal Co. | | | | | | | | | | | | | |
| Girard Mammoth, | Schuylkill, | 162,980 | 30,265 | 1,357 | 194,702 | 271 | 388 | 1 | 1 | 31,650 | 37,218 | ..... | 20 |
| East Bear Ridge Coal Co. | | | | | | | | | | | | | |
| East Bear Ridge, | Schuylkill, | 40,521 | 4,153 | 1,715 | 46,429 | 81 | 387 | ..... | 3 | 4,250 | 18,860 | 23,110 | 12 |

TABLE 2.—Part 2

Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | Locomotives | | | | Total horse power | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors |
|---|-------------|-------------------|-------------|---------|-------------|-------------|-------|-----|----------|-------------------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|
| | | Cylindrical | Horse power | Tubular | Horse power | Gasoline | Steam | Air | Electric | | | | | | | | |
| Ledigh Valley Coal Co., ... | Columbia, | 15 | 555 | 53 | 11,700 | 12,255 | 1 | 14 | ... | 20 | 133 | 16,324 | 15 | 24,461 | 16,099 | 10 | 3 |
| Philadelphia and Reading Coal and Iron Co., ... | Schuylkill, | | | 52 | 6,500 | 6,500 | ... | 8 | 6 | ... | 112 | 16,284 | 9 | 17,464 | 7,074 | 1 | 1 |
| Midvalley Coal Co., ... | Columbia, | | | 16 | 3,150 | 3,150 | 3 | 1 | ... | ... | 33 | 953 | 8 | 10,256 | 2,300 | ... | 1 |
| Grand Mammoth Coal Co., ... | Schuylkill, | | | 8 | 1,600 | 1,600 | ... | 13 | ... | ... | 5 | 969 | 8 | 6,000 | 6,000 | ... | 1 |
| East Bear Ridge Coal Co., ... | Schuylkill, | | | 8 | 1,300 | 1,300 | ... | 1 | ... | ... | 3 | 150 | 3 | 2,300 | 1,000 | ... | 1 |
| Beaver Valley Coal Co., ... | Columbia, | | | 4 | 440 | 440 | ... | ... | ... | ... | 6 | 120 | ... | ... | ... | ... | 1 |
| Hartleigh Brookwood Coal Co., ... | Schuylkill, | | | 1 | 100 | 100 | ... | ... | ... | ... | 2 | 100 | ... | 380 | ... | ... | 1 |
| W. R. McTurk Coal Co., ... | Schuylkill, | | | 6 | 2,290 | 2,290 | ... | ... | ... | ... | 20 | 1,800 | ... | 6,400 | 1,800 | ... | 1 |
| Totals, | | 15 | 555 | 148 | 27,680 | 27,635 | 4 | 47 | 6 | 35 | 339 | 36,301 | 45 | 67,161 | 31,523 | 8 | 11 |

TABLE 3.—Number of each class of employees inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | Outside | | | | | | | | Grand total | | | |
|---|-----------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|--------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|-------------|--------------------|---------------|-----|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employes | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | Bookkeepers and clerks | | All other employes | Total outside | |
| Lehigh Valley Coal Co., Philadelphia and Read- ing Iron Co., Midvalley Coal Co., Girard Mammoth Coal Co., East Bear Ridge Coal Co., Beaver Valley Coal Co., Harleigh Brookwood Coal Co., W. R. McTurk Coal Co., Totals. | Columbia. | 15 | 57 | ... | 762 | 634 | 88 | 36 | 25 | ... | 683 | 2,300 | 1 | 12 | 114 | 134 | 53 | 26 | 13 | 616 | 969 | 3,269 | |
| | Northumberland, | } 5 | 32 | ... | 280 | 193 | 50 | 34 | 13 | 189 | 396 | 1,192 | ... | 8 | 28 | 94 | 81 | 38 | 14 | 401 | 664 | 1,856 | |
| | Schuylkill, | | 6 | ... | 133 | 118 | 16 | 2 | 6 | 51 | ... | 335 | 1 | 1 | 8 | 22 | 18 | 5 | 3 | 121 | 179 | 514 | |
| | Schuylkill, | | 3 | ... | 20 | 35 | 12 | ... | 4 | 24 | ... | 98 | 1 | 1 | 11 | 40 | 38 | 2 | 2 | 195 | 290 | 388 | |
| | Columbia, | 1 | ... | 1 | 20 | 35 | 12 | ... | 4 | 24 | ... | 98 | 1 | 1 | 11 | 40 | 38 | 2 | 2 | 195 | 290 | 388 | |
| | Schuylkill, | 1 | ... | 6 | 119 | 101 | 3 | 1 | 2 | 32 | 11 | 277 | ... | 2 | 8 | 11 | 21 | ... | 3 | 65 | 110 | 387 | |
| | Columbia, | 1 | ... | ... | 12 | 18 | 7 | ... | ... | 7 | ... | 45 | ... | 1 | 3 | 5 | ... | 3 | 1 | 46 | 65 | 110 | |
| | Schuylkill, | 1 | ... | ... | 17 | 15 | 6 | ... | 2 | 16 | 8 | 66 | ... | ... | ... | 9 | ... | ... | ... | 28 | 37 | 103 | |
| | Schuylkill, | 1 | 1 | ... | 35 | 31 | 3 | 3 | 6 | 10 | ... | 90 | 1 | 1 | 12 | 24 | 11 | 4 | 2 | 1 | 79 | 134 | 224 |
| | Schuylkill, | 1 | 1 | ... | 35 | 31 | 3 | 3 | 6 | 10 | ... | 90 | 1 | 1 | 12 | 24 | 11 | 4 | 2 | 1 | 79 | 134 | 224 |
| Totals. | | 28 | 97 | 7 | 1,378 | 1,146 | 185 | 76 | 58 | 330 | 1,098 | 4,403 | 5 | 26 | 184 | 339 | 227 | 78 | 38 | 1,551 | 2,448 | 6,851 | |

TABLE 3.—Part 2

| Names of Operators | County | Average Number of Days Worked Monthly | | | | | | | | | | | | |
|---|------------|---------------------------------------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|-----------------------|-------|
| | | January | February | March | April | May | June | July | August | September | October | November | December ^a | Total |
| Lough Valley Coal Co., | Columbia. | 13 | 14 | 12 | 22 | 20 | 17 | 18 | 16 | 19 | 20 | 22 | 19 | 212 |
| Philadelphia and Reading Coal and Iron Co., | Schuykill. | 16 | 16 | 20 | 22 | 19 | 16 | 14 | 16 | 16 | 22 | 22 | 22 | 221 |
| Midvalley Coal Co., | Columbia. | 17 | 15 | 16 | 22 | 19 | 19 | 19 | 22 | 25 | 23 | 20 | 20 | 237 |
| Gilhard Mammoth Coal Co., | Schuykill. | 23 | 22 | 24 | 25 | 24 | 22 | 16 | 22 | 23 | 25 | 22 | 23 | 271 |
| East Bear Ridge Coal Co., | Schuykill. | ..... | ..... | ..... | 13 | ..... | ..... | ..... | ..... | 13 | 25 | 22 | 21 | 81 |
| Beaver Valley Coal Co., | Columbia. | 22 | 21 | 23 | 13 | 21 | 18 | 18 | 19 | 21 | 18 | 16 | 18 | 223 |
| Schuykill Coal Co., | Schuykill. | 24 | 23 | 23 | 26 | 25 | 25 | 23 | 22 | ..... | 19 | 15 | 24 | 249 |
| W. R. McClure Coal Co., | Schuykill. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 16 | 39 | ..... |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|--|------------------------------|-----------------|-----|-------------------|------------------|-------------------|------------------|------------------|--|
| Jan. 28 | Patrick McMenamen,... | American,... | Carpenter, | 28 | M. | 1 | 5 | Packer No. 4 | Schuylkill,..... | Killed by having head crushed between empty cars at foot of chain hoist while assisting to retrack a derailed car. Outside. |
| Feb. 6 | Joseph Rowan, | American,... | Driver, | 21 | S. | .... | ... | Centralia, | Columbia, | Killed by being crushed between top of car and timber over a rock dump. He was on top of car throwing rock from back of car to front end when the car dumped. Killed by falling through a hole in floor of breaker, a distance of 60 feet. The carpenters were making repairs to that part of the machine and had placed a fence around the hole and he went inside of the fence. Outside. |
| April 7 | Anthony Waretto, ... | Italian, | Slatepicker, .. | 18 | S. | .... | ... | Packer No. 4. | Schuylkill,..... | Head crushed. He was found dead in the fan house with his head in the crank pit. In some manner he fell against crank during the night. Outside. |
| May 2 | Christ Pitts, | American,... | Laborer, | 76 | M. | ... | ... | East, | Schuylkill,..... | Killed by rush of coal while robbing pit-lays. He was caught against the manway 95 feet above the ganaway. |
| 25 | Jerry Yeager, | American,... | Miner, | 36 | M. | 1 | 4 | Sayre, | Northumberland | Killed by being caught between shaker hangers on breaker. He was helping to repair machine and was within the line. The signal the engineer sent the machinery and in some unknown manner his head was caught between the shaker boards. Outside. |
| June 17 | Harry Ross, | Italian, | Oiler, | 23 | S. | ... | ... | Packer No. 4. | Schuylkill,..... | (Killed by explosion of gas at face of the second level Mammoth gangway on the night shift. The miner and these two laborers drilled a hole in the coal with a compressed air drill. When they pulled the drill from the hole the air hose became detached and caused the explosion. The miner contacted the explosion. Singmaster was killed and Risseenger was fatally burned and died July 1 at hospital. |
| 21 | { William Singmaster, { Edward Risseenger, .. | American, .. American, .. | Laborer, | 32 | S. | ... | ... | Potts, | Columbia, | |
| | | | Laborer, | 49 | M. | 1 | 2 | | | |

| | | | | | | | | | |
|----------|--|---------------------------------|---------------------------------|----------|----------|--------|----------------------|-------------------|--|
| June 22 | Harry Kerehow, | Russian, ... | Laborer, | 27 | M. | ..... | West Bear Ridge | Schuylkill, | Fatally injured by falling down chute into gangway. He worked in the airway and in walking out he stepped into the chute. Died August 6 at hospital. |
| July 10 | Michael Hinchuck, ... | Austrian, .. | Driller, | 21 | M. | 1 | Centralia, | Columbia, | Killed by being buried in a hole that broke through from the face of an old breast. He had killed a hole with a steam drill and had fired several charges to spring it and had commenced to charge it for the final blast, when the ground under him gave way. Outside. |
| 22 | Adam Raker, | American, .. | Driver, | 28 | S. | ..... | Midvalley, | Columbia, | Suffocated by rush of coal in chute. The coal was blocked in the breast chute and he went up the manway to start it for the loader and was caught in the rush. |
| Sept. 13 | John Burns, | American, ... | Miner, | 54 | M. | 1 | East, | Schuylkill, | Killed by fall of coal at face of breast. After firing a blast he returned to attach the new wires for another blast, and while in the act he was killed by a fall across the breast to his partner, he was caught by fall of coal. |
| 15 | John Haynick, | Slavonian, ... | Machine runner | 40 | M. | 1 | Sayre, | Northumberland | Killed by explosion of blast. He drilled into an unexploded blast in face of tunnel left from a former round of blasts. |
| Nov. 27 | (Frank Washeffskie, ..) Frank Ritco, | Lithuanian, .. Austrian, ... | Minor,, Laborer, | 57 42 | M. M. | 1 1 | } Packer No. 5, 2 | Schuylkill, | Suffocated by wood smoke following an explosion of gas. He and his laborer were skipping a pillar 160 feet above the gangway. One of the assistant foremen was that was driving in a hole to open an airway stopping in a hole that was driven in the face of a second level to the gangway, opposite where these men were at work. A blast was fired on a trough over the top of the hole with the stopping in, which caused an explosion of gas that ignited the gangway and chute timber and Washeffskie and Ritco were suffocated. |
| Dec. 24 | Matthew Hartigan, ... | Irish, | Watchman, ... | 56 | M. | ..... | Girard mortl. | Schuylkill, | Fatally burned. He was found dead in a stripping 10 feet from steam shovel, his clothing burned off the body and his body burned to a crisp. His lantern was burned in the shovel and a shovel was broken by the explosion. It was found how his clothing became ignited. Outside. |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|--------------------------|----------------|-----------------------|-----|-------------------|----------------------|-------------------|--|
| Jan. 5 | Bolch Robfoski, | Russian, .. | Laborer, | 25 | M. | Sayre, | Northumberland | Hands and face burned by explosion of gas. |
| 9 | Joseph Wanzick, | Russian, .. | Laborer, | 30 | M. | Sayre, | Northumberland | Hands and face burned by explosion of gas. |
| 18 | Robert Welsh, | American, .. | Laborer, | 34 | S. | Packer No. 4, | Schuylkill, | Top of finger cut off while handling a pump casting. |
| Feb. 16 | Edward Durkin, | American, .. | Miner, | 46 | M. | Centralia, | Columbia, | Body bruised by fall of coal at face of breast. |
| 19 | Patrick McGuire, | American, .. | Timberman, | 40 | M. | Packer No. 3, | Schuylkill, | Arm fractured by hoisting blocks falling on him. |
| March 24 | Patrick O'Reilly, | American, .. | Pumpman, | 26 | S. | Packer No. 3, | Schuylkill, | Face and hands scalded by steam from pump. |
| 25 | Michael Bradski, | Russian, .. | Starter, | 40 | M. | Centralia, | Columbia, | Leg fractured by rush of coal at battery. |
| 31 | Joseph Molonowski, | Russian, .. | Miner, | 55 | M. | Centralia, | Columbia, | Foot fractured by fall of rock at face of breast. |
| April 7 | Metro Connelski, | Russian, .. | Laborer, | 21 | S. | Centralia, | Columbia, | Face lacerated by flying coal from blast. |
| 15 | John Laumet, | American, .. | Foreman, | 65 | M. | Centralia, | Columbia, | Fibs bruised by cars. Outside. |
| 19 | Sylvester Lally, | American, .. | Engineer, | 23 | S. | Grand Mammoth, | Schuylkill, | Finger cut off while repairing machinery. Outside. |
| 24 | Frank Gallagher, | American, .. | Miner, | 54 | M. | Packer No. 5, | Schuylkill, | Face burned by explosion of gas. |
| 24 | Camel Zippo, | Italian, .. | Machine runner, | 22 | S. | Potts, | Columbia, | Compound fracture of arm by cars. |
| 27 | John Butscavage, | Lithuanian, .. | Laborer, | 22 | S. | Sayre, | Northumberland | Leg fractured by falling from top of car. |
| 27 | Evan Thomas, | Welsh, | Miner, | 50 | M. | Midvalley, | Northumberland | Leg fractured by rock rolling on him. |
| 28 | Charles Kitchen, | Polish, | Miner, | 52 | M. | Centralia, | Columbia, | Face and hands burned by explosion of gas. |
| 29 | Martin Marsho, | Austrian, .. | Miner, | 33 | M. | Centralia, | Columbia, | Two ribs fractured by fall of coal at face. |
| 30 | John Lockwood, | American, .. | Laborer, | 53 | M. | Packer No. 2, | Schuylkill, | Collar bone fractured by cars. |
| 6 | John Mealey, | Irish, | Fireman, | 62 | M. | Packer No. 5, | Schuylkill, | Head and leg lacerated by falling from top of boiler. Outside. |
| 12 | Richard Wills, | English, .. | Laborer, | 55 | M. | Centralia, | Columbia, | Two ribs fractured by falling in lumber shed. Outside. |
| 14 | Joseph Mish, | Polish, | Loader, | 33 | M. | Sayre, | Northumberland | Leg fractured by fall of coal on gangway. |
| 15 | James Rowland, | Russian, .. | Laborer, | 24 | M. | Sayre, | Northumberland | Face and hands burned by explosion of gas. |
| 19 | Steve Donal, | Austrian, .. | Laborer, | 43 | M. | Sayre, | Northumberland | Face and hands burned by explosion of gas. |
| 19 | Ray Sherman, | American, .. | Motorman, | 23 | S. | Sayre, | Northumberland | Arm fractured by cars. |
| 27 | Thomas Mooney, | Irish, | Miner, | 54 | M. | Centralia, | Columbia, | Toes fractured by fall of coal at face of breast. |

| | | | | | | | | | |
|-------|----|-------------------------|-----------------|---------------------|----|----|------------------------|----------------|--|
| June | 2 | Michael Levenskie, ... | American, ... | Laborer, ... | 16 | S. | Midvalley, ... | Columbia, ... | Finger cut off by brake-chain on railroad car. Outside. |
| | 4 | Alex Vandaloskie, ... | Polish, ... | Miner, ... | 22 | S. | Midvalley, ... | Columbia, ... | Face and hands burned by explosion of gas. |
| | 7 | David Mitchakenus, ... | Hungarian, ... | Miner, ... | 45 | M. | Packer No. 5, ... | Schuykill, ... | Head lacerated and back bruised by fall of rock at face of breast. |
| | 9 | Pio Difello, ... | Tyrolean, ... | Rockman, ... | 23 | S. | East Bear Ridge, ... | Schuykill, ... | Leg lacerated by blast in tunnel. |
| | 21 | Charles Stotzbach, ... | American, ... | Miner, ... | 42 | M. | Foris, ... | Columbia, ... | Face and hands burned by explosion of gas. |
| | | William Gerrity, ... | American, ... | Fireman, ... | 31 | M. | Sayre, ... | Northumberland | Face and head scalded by steam on steam shovel. Outside. |
| July | 24 | Anthony Cowalcheck, ... | Lithuanian, ... | Miner, ... | 30 | M. | Packer No. 5, ... | Schuykill, ... | Face and hands burned by explosion of gas. |
| | 8 | Dan Collins, ... | American, ... | Laborer, ... | 22 | S. | East Bear Ridge, ... | Schuykill, ... | Shin fractured by falling off a mule. Outside. |
| Aug. | 10 | John Wisheyla, ... | Polish, ... | Miner, ... | 23 | S. | Midvalley, ... | Columbia, ... | Face and hands burned by explosion of gas. |
| | 3 | Elmer Johnson, ... | American, ... | Loader, ... | 65 | M. | Packer No. 4, ... | Schuykill, ... | Head and body bruised. Struck by falling material in breaker. |
| | 9 | Thomas G. Evans, ... | American, ... | Pumpman, ... | 25 | M. | Girard Bear Ridge, ... | Schuykill, ... | Arm fractured by steam pipe that burst in pump house. |
| | 11 | Albert Vodoris, ... | Lithuanian, ... | Miner, ... | 35 | M. | Packer No. 5, ... | Schuykill, ... | Face burned by explosion of gas. |
| | 13 | Solomon Polima, ... | Italian, ... | Miner, ... | 31 | S. | Centralia, ... | Columbia, ... | Clavicle fractured by falling on gangway. |
| | 20 | Peter Corrigan, ... | American, ... | Miner, ... | 30 | M. | Centralia, ... | Columbia, ... | Back severely bruised by fall of coal at face of breast. |
| Sept. | 27 | Jerry Knittle, ... | American, ... | Miner, ... | 56 | M. | Sayre, ... | Northumberland | Leg fractured by fall of coal at face of breast. |
| | 16 | George Matijek, ... | Slavonian, ... | Machine runner, ... | 25 | M. | Sayre, ... | Northumberland | Leg and arm lacerated by blast in tunnel. |
| | 28 | Michael Sikko, ... | American, ... | Miner, ... | 55 | M. | Sayre, ... | Northumberland | Compound fracture of leg by fall of slate at face. |
| | 17 | Neal Conway, ... | American, ... | Runner, ... | 28 | S. | Centralia, ... | Columbia, ... | Hand crushed while blocking a car wheel. |
| | 25 | Michael Kovitch, ... | Russian, ... | Laborer, ... | 29 | M. | Centralia, ... | Columbia, ... | Arm fractured by fall of coal while retreating a chute. |
| | 28 | Steve Kovitch, ... | Greek, ... | Laborer, ... | 18 | S. | Sayre, ... | Northumberland | Knee fractured by being bumped between cars. Outside. |
| | 30 | Mike Wasser, ... | Lithuanian, ... | Loader, ... | 28 | S. | Packer No. 2, ... | Schuykill, ... | Compound fracture of leg by fall of coal at face. |
| Oct. | 4 | Anthony Tushinski, ... | Greek, ... | Miner, ... | 24 | S. | Sayre, ... | Northumberland | Hands and neck burned by explosion of gas. |
| | 5 | Theo. Hamock, ... | Greek, ... | Laborer, ... | 55 | S. | Sayre, ... | Northumberland | Two fingers cut off while handling rails. Outside. |
| | | Anthony Petrusky, ... | Lithuanian, ... | Miner, ... | 30 | M. | East Bear Ridge, ... | Schuykill, ... | Collar bone fractured by fall of coal at face of gangway. |
| | 11 | Edward Lavelle, ... | Irish, ... | Miner, ... | 47 | M. | Centralia, ... | Columbia, ... | Top of finger cut off by being caught between buggy and roof. |
| | 19 | Stney Savonis, ... | Russian, ... | Miner, ... | 23 | S. | Packer No. 5, ... | Schuykill, ... | Collar bone fractured by falling down a breast. |
| Nov. | 20 | Thomas Carter, ... | American, ... | Loader-boss, ... | 42 | M. | Hammond, ... | Schuykill, ... | Foot crushed by cars. |
| | 6 | James Quigley, ... | American, ... | Footman, ... | 27 | S. | East, ... | Schuykill, ... | Two ribs fractured by falling from top of breast. |
| | 13 | Tony Monton, ... | Italian, ... | Plateman, ... | 43 | S. | Packer No. 5, ... | Schuykill, ... | Ribs fractured by rock falling on it in breaker. Outside. |
| | 16 | John Fagley, ... | American, ... | Miner, ... | 54 | M. | Sayre, ... | Northumberland | Scalp lacerated by falling coal in gangway. |
| Dec. | 20 | William Brennan, ... | American, ... | Blacksmith- helper | 28 | S. | Hammond, ... | Schuykill, ... | Top of finger cut off while sharpening steel. |
| | 12 | Peter Fullen, ... | American, ... | Loader, ... | 49 | S. | Girard Bear Ridge, ... | Schuykill, ... | Ribs and pelvis fractured by a prop that rolled down the slope. |
| | 13 | John McAndrew, ... | American, ... | Laborer, ... | 17 | S. | Centralia, ... | Columbia, ... | Two fingers cut off. Caught between snub rope and prop. Outside. |
| | 15 | Thomas Kilroy, ... | American, ... | Starter, ... | 42 | M. | Hammond, ... | Schuykill, ... | Leg fractured by rush of coal in chute. |

CONDITION OF COLLIERIES

LEHIGH VALLEY COAL COMPANY

Centralia, Sayre, Packer Nos. 2, 3, 4 and 5 Collieries.—Ventilation, drainage and condition as to safety, good.

PHILADELPHIA AND READING COAL AND IRON COMPANY

Hammond, Bast and Potts Collieries.—Ventilation, drainage and condition as to safety, good.

MIDVALLEY COAL COMPANY

Midvalley Colliery.—Ventilation and condition as to safety, good. Drainage, fair.

GIRARD MAMMOTH COAL COMPANY

Girard Mammoth Colliery.—Ventilation and condition as to safety, good. Drainage, fair.

EAST BEAR RIDGE COAL COMPANY

East Bear Ridge Colliery.—Ventilation, drainage and condition as to safety, good.

BEAVER VALLEY COAL COMPANY

Scotch Valley Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

HARLEIGH BROOKWOOD COAL COMPANY

West Bear Ridge Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

W. R. McTURK COAL COMPANY

Girard Bear Ridge Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

IMPROVEMENTS

LEHIGH VALLEY COAL COMPANY

Centralia Colliery.—A rock hole was driven from East Four Foot basin to East Holmes basin, distance 97 feet.

A rock hole was driven from Mammoth leader to Four Foot basin, distance 36 feet.

Mouth of Seven Foot tender slope concreted through wash.

Mouth of drainage tunnel concreted through wash.

Mouth of Seven Foot Mammoth slope concreted through wash.

Logan Slope.—No. 5 slope head concreted.

Continental Shaft.—Rock slope from East south dip No. 2 level Mammoth gangway to East Holmes basin slope, was completed, distance 300 feet.

Locust Run Slope.—A rock plane was driven from East south dip Skidmore gangway to Mammoth vein.

A tunnel was driven from West south dip Skidmore No. 1 gangway to Mammoth vein water level, distance 220 feet.

Sayre Colliery.—A tunnel was driven from East south dip Holmes vein to Skidmore vein second level, distance 122 feet.

A rock airway was driven from third level to second level Holmes bottom split, distance 690 feet.

A tunnel was driven from south dip Skidmore to north dip Mammoth vein third level, distance 566 feet.

A tunnel was driven from face of present first level tunnel to Buck Mountain vein south dip, distance 440 feet.

Sioux No. 3 Slope.—A rock cross cut was driven from Holmes vein north dip to Holmes vein south dip, third level, distance 172 feet.

A tunnel was driven from Sioux No. 3 West south dip Mammoth third level through barrier pillar to Sioux No. 1, No. 10 vein south dip and Holmes bottom vein south dip, distance 105 feet.

Packer No. 2 Colliery.—A tunnel was driven from Holmes to Orchard vein third level, distance 124 feet.

Skidmore East second level gangway was connected with west third level Skidmore gangway from Packer No. 4, to be used for drainage and haulage purposes. A new hospital was built on the fifth level.

Packer No. 3 Colliery.—A tunnel was driven from Buck to Little Buck vein, fourth level, distance 33 feet.

Electric haulage was installed on the second level.

Packer No. 4 Colliery.—A tunnel was driven from Seven Foot to Buck Mountain vein, first level, 73 feet; also tunnel from Seven Foot Buck Mountain, second level, 56 feet.

Buck Mountain slope was extended through rock to surface, 130 feet.

A tunnel was driven from Seven Foot to Skidmore vein East south dip, third level, 117 feet.

A rock hole was driven from Primrose to Orchard vein, third level, 106 feet. One 25 by 44 by 15 by 48 inch Goyne pump was installed, and a 14-inch column line laid to the surface. New suit conveyor line was completed.

A wash house for boiler house employes was built in the east end of boiler house.

A new fireproof hospital was built outside.

A new 14-inch column line from Buck slope to the breaker was completed for breaker wash water and fire protection.

Packer No. 5 Colliery.—A rock airway was driven on second level from Seven Foot to Mammoth, 120 feet.

A rock airway was driven from Seven Foot to Holmes east second level, 142 feet.

A rock airway was driven from Little Diamond vein, first level, to surface, 200 feet.

A new fireproof fan was installed at shaft, replacing old fans at drift and shaft.

One thousand additional horse power was added to boiler plant and new brick building erected for same. New conveyor line was built from breaker to boiler house for fuel. A conveyor line was built from boiler house for disposing of ashes. A new steel breaker was put in operation.

EAST BEAR RIDGE COAL COMPANY

East Bear Ridge Colliery.—A new breaker was built and put in operation during the year, and electric haulage was installed in the mines.

W. R. McTURK COAL COMPANY

Girard Bear Ridge Colliery.—A new breaker was built and put in operation during the year.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen, was held in St. Ignatius Hall, Centralia, May 18 and 19. The Board of Examiners was composed of the following: James A. O'Donnell, Mine Inspector; Centralia; H. J. Heffner, Superintendent, Centralia; John Meredith, Miner, Ashland; James Price, Miner, Ashland.

The following persons passed a satisfactory examination and were granted certificates:

MINE FOREMEN

Lawrence Morrissey, Ashland; James H. Pierce, Frackville; James Burns, George Pollard, Joseph Koch, Thomas Gallagher, Centralia; Michael O'Boyle, Lost Creek; John H. Jones, Mahanoy Plane.

ASSISTANT MINE FOREMEN

Thomas Wills, Jr., Theodore Krah, Centralia; Michael L. Toole, Lost Creek; Joseph Lapinski, Mount Carmel.

FIFTEENTH DISTRICT

NORTHUMBERLAND COUNTY

Mount Carmel, Pa., February 26, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Fifteenth Anthracite District, for the year ending December 31, 1915.

Respectfully submitted,

BENJAMIN I. EVANS,

Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 9 |
| Number of mines, | 28 |
| Number of mines in operation, | 28 |
| Number of tons of coal shipped to market, | 2,040,504 |
| Number of tons used at mines for steam and heat, | 348,926 |
| Number of tons sold to local trade and used by employes, | 46,701 |
| Number of tons produced, | 2,436,131 |
| Number of tons produced by compressed air machines, .. | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 4,904 |
| Number of persons employed outside, | 1,820 |
| Number of fatal accidents inside of mines, | 15 |
| Number of fatal accidents outside, | 2 |
| Number of non-fatal accidents inside of mines, | 18 |
| Number of non-fatal accidents outside, | 5 |
| Number of tons of coal produced per fatal accident inside, .. | 162,409 |
| Number of tons produced per fatal accident outside, ... | 1,218,066 |
| Number of tons produced per fatal accident inside and outside, | 143,302 |
| Number of persons employed per fatal accident inside, .. | 327 |
| Number of persons employed per fatal accident outside, . | 910 |
| Number of persons employed per fatal accident inside and outside, | 396 |
| Number of persons employed per non-fatal accident inside, .. | 272 |
| Number of persons employed per non-fatal accident outside, | 364 |
| Number of persons employed per non-fatal accident inside and outside, | 292 |
| Number of wives made widows, | 11 |
| Number of children made orphans, | 37 |
| Number of steam locomotives used inside of mines, .... | ..... |
| Number of steam locomotives used outside, | 19 |
| Number of compressed air locomotives used inside, | 1 |
| Number of compressed air locomotives used outside, .... | ..... |
| Number of electric motors used inside, | 22 |
| Number of electric motors used outside, ..... | ..... |
| Number of gasoline locomotives used inside, | 1 |
| Number of fans in use, | 28 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 14 |
| Number of non-gaseous mines in operation, | 14 |
| Number of new mines opened, ..... | ..... |
| Number of old mines abandoned, ..... | ..... |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|--|------------------|
| Philadelphia and Reading Coal and Iron Company, | 921,139 |
| Susquehanna Coal Company, | 868,323 |
| Colonial Collieries Company, | 266,863 |
| Greenough Red Ash Coal Company, | 255,291 |
| Enterprise Coal Company, | 103,355 |
| Shamokin Red Ash Coal Company, | 21,160 |
| Total, | <u>2,436,131</u> |

Production by Counties

| | |
|-----------------------|------------------|
| Northumberland, | <u>2,436,131</u> |
|-----------------------|------------------|

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed, number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|---|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| Philadelphia and Reading Coal and Iron Co., | 5 | ..... | 5 | 9 | 2 | 12 | 184,928 | 102,349 | 1,975 | 669 | 2,644 | 395 | ..... | 219 | 223 |
| Susquehanna Coal Co., | 6 | ..... | 7 | 6 | ..... | 6 | 144,720 | 144,720 | 2,061 | 711 | 2,772 | 343 | ..... | 343 | 355 |
| Colonial Collieries Co., ..... | ..... | 1 | 1 | 1 | ..... | 1 | 295,853 | 295,853 | 365 | 175 | 540 | 101 | ..... | 365 | ..... |
| Greenough Red Ash Coal Co., | 4 | ..... | 4 | 2 | ..... | 2 | 63,823 | 127,645 | 406 | 135 | 601 | ..... | ..... | 203 | ..... |
| Miscellaneous Companies, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 97 | 70 | 167 | ..... | ..... | ..... | ..... |
| Totals and averages, | 15 | 2 | 17 | 18 | 5 | 23 | 162,409 | 135,341 | 4,904 | 1,820 | 6,724 | 527 | 910 | 572 | 364 |

Names of Operators

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | 1 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 3 | 20.00 |
| Falls of slate, ..... | ..... | 1 | ..... | ..... | 1 | ..... | 1 | 1 | ..... | ..... | 1 | 1 | 6 | 40.00 |
| Falls of roof, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 6.66 |
| Mine cars, ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 13.33 |
| Rush of coal, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | 6.67 |
| Rush of water, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 6.67 |
| Struck by timber, ... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 6.67 |
| Totals, | 2 | 2 | 2 | 1 | 2 | ..... | 1 | 1 | 1 | ..... | 2 | 1 | 15 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | 2 | 100.00 |
| Totals, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | 2 | 100.00 |
| Grand totals inside and outside, | 2 | 2 | 2 | 1 | 2 | ..... | 1 | 1 | 1 | 1 | 3 | 1 | 17 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, ..... | ..... | ..... | 1 | ..... | ..... | 1 | 1 | 1 | ..... | ..... | ..... | 1 | 3 | 16.67 |
| Falls of slate, | 1 | 1 | ..... | ..... | 1 | 1 | 1 | 1 | ..... | ..... | 1 | ..... | 4 | 38.89 |
| Explosions of gas, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 2 | 3 | 16.67 |
| Blasts, premature and otherwise, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | ..... | 2 | 11.12 |
| Falling into slopes, etc., ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | 5.55 |
| Rush of coal, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 5.55 |
| Explosion of carbide, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 5.55 |
| Totals, | 1 | 1 | 2 | ..... | 1 | 1 | 1 | 2 | 1 | ..... | 4 | 4 | 18 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | 1 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 3 | 60.00 |
| Scalded by steam, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 20.00 |
| Struck by timber, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 20.00 |
| Totals, | 1 | ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | 1 | ..... | 1 | 5 | 100.00 |
| Grand totals inside and outside, | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 4 | 5 | 23 | ..... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| Inside | | | | | | | | | | | | |
| Fire bosses and assistants, .. | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Miners, | 1 | 2 | ... | 1 | 1 | ... | ... | 1 | 1 | ... | 1 | 9 |
| Miners' laborers, | ... | ... | 1 | ... | 1 | ... | 1 | ... | ... | ... | 1 | 4 |
| Drill runners, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Totals, | 2 | 2 | 2 | 1 | 2 | ... | 1 | 1 | 1 | ... | 2 | 15 |
| Outside | | | | | | | | | | | | |
| Conductors, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 |
| Brakemen, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Totals, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 2 |
| Grand totals inside and outside, | 2 | 2 | 2 | 1 | 2 | ... | 1 | 1 | 1 | 1 | 3 | 17 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| Inside | | | | | | | | | | | | |
| Miners, | 1 | 1 | 2 | ... | 1 | 1 | 1 | 1 | 1 | ... | 3 | 14 |
| Miners' laborers, | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 3 |
| Bottommen, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Totals, | 1 | 1 | 2 | ... | 1 | 1 | 1 | 2 | 1 | ... | 4 | 18 |
| Outside | | | | | | | | | | | | |
| Drivers, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 |
| Fanmen, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Laborers, | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 2 |
| Spraggers, | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 |
| Totals, | 1 | ... | ... | 1 | 1 | ... | ... | ... | ... | 1 | ... | 5 |
| Grand totals inside and outside, | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 4 | 23 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| American, | | 1 | 1 | ..... | 1 | ..... | ..... | ..... | 1 | ..... | ..... | 4 |
| Irish, | | | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Polish, | | | | | | | | | | | 1 | 3 |
| Hungarian, | | | | | 1 | ..... | 1 | ..... | ..... | ..... | ..... | 2 |
| Italian, | | | | | | | | | | 1 | ..... | 1 |
| Slavonian, | | | | | | | | | | | | 1 |
| Lithuanian, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Austrian, | | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 |
| Russian, | | 1 | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 |
| Tyrolean, | | | | | | | | | | | 1 | 1 |
| Totals, | 2 | 2 | 2 | 1 | 2 | ..... | 1 | 1 | 1 | 1 | 3 | 17 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| American, | 2 | ..... | ..... | 1 | 1 | ..... | 1 | ..... | ..... | 1 | ..... | 8 |
| German, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Polish, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 5 |
| Italian, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 2 |
| Lithuanian, ..... | ..... | ..... | 1 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 2 |
| Austrian, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 |
| Russian, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | ..... | ..... | 1 | 3 |
| Totals, | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 4 | 21 |

| | | | | | | | | | |
|----------------------------|--------------|-------------|------------|----|-----|-----|-----|-----|-----------------|
| Colonial Collieries Co. | | | | | | | | | |
| Natalie Colliery: | | | | | | | | | |
| No. 1, Lykens, | Slope, | Gaseous, .. | Fan, | 14 | 4 | 4.4 | 82 | 1.6 | Mullen, .. |
| No. 2, Lykens, | Slope, | Non-gas, .. | Fan, | 16 | 4 | 4.4 | 112 | 2.5 | Electricity, .. |
| No. 3, Lykens, | Slope, | Non-gas, .. | Fan, | 6 | 3 | 4.4 | 400 | .3 | Electricity, .. |
| No. 3, | Slope, | Non-gas, .. | Fan, | 14 | 4 | 5.0 | 50 | .6 | Steam, |
| No. 4, | Slope, | Non-gas, .. | Fan, | 14 | 4 | 4 | 80 | 1.8 | Mullen, .. |
| No. 4 (New), | Slope, | Non-gas, .. | Fan, | 6 | 3 | 2 | 300 | .4 | Electricity, .. |
| | | | | | | | | | Compressed air. |
| Greenough Red Ash Coal Co. | | | | | | | | | |
| Greenough Colliery: | | | | | | | | | |
| Greenough, | Shaft, | Non-gas, .. | Fan, | 21 | 6.4 | 5.6 | 75 | 2.2 | Mullen, .. |
| Greenough, | Slope, | Non-gas, .. | Fan, | 12 | 4 | 4 | 125 | 1.5 | |
| Greenough, | Dip-gang, .. | Non-gas, .. | Fan, | 9 | 3 | 3 | 115 | 1 | |
| Enterprise Coal Co. | | | | | | | | | |
| Enterprise Colliery, | Shaft, | Non-gas, .. | Fan, | 16 | 4 | 5 | 90 | 2 | Gulbal, .. |
| | | | | | | | | | Steam, |
| | | | | | | | | | 22,500 |
| | | | | | | | | | 21,000 |
| | | | | | | | | | 23,600 |
| | | | | | | | | | |
| | | | | | | | | | 69,286 |
| | | | | | | | 6 | | 73,452 |
| | | | | | | | 2 | | 34,280 |
| | | | | | | | 1 | | 31,000 |
| | | | | | | | 1 | | 35,085 |
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TABLE 3.—Number of each class of employees inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | | Outside | | | | | | | | Grand total | |
|--|-----------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|---------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|---------------------|-------------|---------------|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employees | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | Bookkeepers and clerks | All other employees | | Total outside |
| Philadelphia and Reading Coal and Iron Co. | Northumberland, | 5 | 30 | ... | 878 | 286 | 324 | 20 | 20 | 182 | 439 | 1,975 | ... | 8 | 29 | 114 | 69 | 47 | 17 | 385 | 689 | 2,644 |
| Susquehanna Coal Co. | | 4 | 7 | 37 | 918 | 364 | 129 | 23 | 37 | 133 | 539 | 2,031 | 1 | 1 | 46 | 103 | 241 | ... | 23 | 294 | 711 | 5,772 |
| Colonial Collieries Co. | | 1 | 4 | ... | 160 | 65 | 20 | 4 | 9 | 33 | 69 | 365 | 1 | 1 | 14 | 27 | 20 | ... | 2 | 104 | 175 | 540 |
| Greenough Red Ash Coal Co. | | 4 | 1 | 2 | 198 | 79 | 31 | 2 | 6 | 30 | 53 | 406 | 1 | 1 | 11 | 21 | 79 | 1 | 3 | 78 | 195 | 601 |
| Enterprise Coal Co. | | 1 | 1 | ... | 43 | 12 | 6 | 5 | 5 | 21 | ... | 97 | 1 | 1 | 7 | 26 | ... | 8 | 9 | 2 | 54 | 151 |
| Slamokin Red Ash Coal Co. | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | 2 | 2 | ... | ... | 9 | 16 | 16 |
| Totals, | | 15 | 43 | 39 | 2,197 | 786 | 520 | 54 | 77 | 283 | 1,070 | 4,904 | 5 | 16 | 108 | 283 | 411 | 62 | 53 | 872 | 1,820 | 6,721 |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|-------|---------------------------|----------------|---------------|-----|-------------------|------------------|-------------------|-------------------|-----------------|---|
| Jan. | 11 John Dudashick, | Slavonian, .. | Drill runner | 33 | M. | 1 | 4 | Richards, | Northumberland. | Killed by fall of rock in tunnel. |
| 25 | Jeston Senkon, | Lithuanian, .. | Miner, | 40 | M. | 1 | 5 | Greenough, | | Killed by fall of coal off pillar while loading car. |
| Feb. | 3 George Schupe, | American, ... | Miner, | 45 | M. | 1 | 1 | Alaska, | | Killed by fall of slate at face of pillar. |
| | Steve Koskie, | Russian, | Miner, | 38 | S. | .... | .... | Richards, | | Killed by car running over him on gangway. He fell off car. |
| March | 4 Oscar Keller, | American, ... | Laborer, .. | 47 | M. | 1 | 3 | Alaska, | Northumberland. | Killed by rush of water. He was putting in a sprag between the rib and a slush pipe, and while hammering the sprag the pipe came apart and the pressure of water forced him against the rib of gangway. |
| 23 | James O'Neil, | Irish, | Fire boss, .. | 59 | S. | .... | .... | Reliance, | | Killed by being run over by car on plane. |
| April | 6 Mike Chiesna, | Russian, | Miner, | 42 | M. | 1 | 7 | Locust Spring, .. | | Killed by fall of coal at face of gangway. |
| May | 4 Abouzo Welsh, | American, ... | Miner, | 35 | M. | 1 | 1 | Pennsylvania, .. | | Killed by being struck on head by a prop at face of pillar. |
| July | 8 Mike Howard, | Hungarian, .. | Laborer, ... | 38 | S. | .... | .... | Greenough, | | Killed by fall of slate in breast. |
| Aug. | 21 Jake Kaslinski, | Polish, | Laborer, ... | 33 | M. | 1 | 6 | Scott, | | Killed by fall of slate at face of gangway. |
| Sept. | 21 Patrick Curran, | Polish, | Miner, | 39 | M. | 1 | 6 | Greenough, | | Killed by fall of slate at face of breast. |
| Oct. | 1 George Rick, | American, ... | Miner, | 45 | M. | 1 | 3 | Greenough, | | Killed by fall of top coal at face of breast. |
| | | Italian, | Conductor, .. | 22 | S. | .... | .... | Natalie, | | Killed by being run over by engine and cars (Outside.) |
| Nov. | 6 Steve Mazura, | Austrian, ... | Brakeman, .. | 18 | S. | .... | .... | Richards, | | Killed by being run over by engine. He fell off the engine. (Outside.) |
| 19 | Charles Domotski, .. | Polish, | Laborer, ... | 23 | M. | 1 | .... | Alaska, | | Killed by fall of slate in an old breast. |
| Dec. | 13 Lawrence Capaletti, .. | Tyrolese, ... | Miner, | 43 | S. | .... | .... | Pennsylvania, .. | | Killed by rush of coal in heading. |
| 21 | Mike Graeff, | Polish, | Miner, | 52 | M. | 1 | 6 | Scott, | | Killed by fall of slate while loading car at face of gangway. |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|---------------------------|----------------|-----------------|-----|-------------------|------------------|-----------------|---|
| Jan. 11 | Albert Lehl, | American, .. | Laborer, | 21 | S. | Alaska, | | Injured internally. Caught between ear and concrete wall. (Outside.) |
| 25 | William Beltz, | American, .. | Miner, | 41 | M. | Alaska, | | Leg broken by fall of slate in breast. |
| Feb. 24 | John Metzinger, | German, | Miner, | 44 | M. | Alaska, | | Leg broken by fall of slate at face of breast. |
| March 12 | Simon Mickowski, | Lithuanian, .. | Miner, | 39 | M. | Greenough, | | Leg broken by fall of coal at face of breast. |
| 24 | Stany Statskill, | Polish, | Miner, | 40 | M. | Alaska, | | Leg broken by being struck by lump of coal that rolled down chute. |
| April 21 | John Johnson, | American, .. | Spragger, | 19 | S. | Alaska, | | Arm broken by being bumped between cars. (Outside.) |
| May 5 | Edward Reed, | American, .. | Laborer, | 63 | S. | Alaska, | | Leg broken by a piece of timber rolling on it. (Outside.) |
| 11 | Alfred Kidder, | Russian, | Miner, | 35 | M. | Natalie, | | Leg broken by fall of slate in chute. |
| June 7 | George McLitus, | Lithuanian, .. | Miner, | 40 | M. | Alaska, | | Arm broken and pelvis injured by fall of slate at face of chute. |
| July 28 | Joseph Naylor, | American, .. | Miner, | 27 | M. | Greenough, | Northumberland. | Leg broken by fall of slate at face of breast. |
| Aug. 10 | Conda Brila, | Austrian, | Laborer, | 20 | S. | Relance, | | Leg broken by fall of slate at face of breast. |
| | Zigmond Rokus, | Russian, | Miner, | 37 | M. | Alaska, | | Leg broken and middle finger cut off by fall of coal on gangway. |
| Sept. 24 | Tony Agen, | Italian, | Miner, | 24 | M. | Richards, | | Injured internally by falling down breast manway. |
| Oct. 20 | Sam Bouchack, | American, .. | Driver, | 19 | S. | Richards, | | Leg broken by being bumped between car and mule. |
| Nov. 8 | Joseph Sovokinis, | Russian, | Miner, | 30 | M. | Pennsylvania, .. | | Injured internally by fall of slate at face of pillar. |
| 17 | Anthony Griscavage, | Polish, | Miner, | 38 | M. | Alaska, | | Head injured by premature blast at face of breast. |
| | Wally Derovitch, | Polish, | Laborer, | 22 | S. | Alaska, | | Head and body injured by premature blast at face of breast. |
| | George Bervitski, | Polish, | Miner, | 42 | M. | Pennsylvania, .. | | Burned by explosion of gas in heading. After firing a shot he went back with a naked light on his head. |
| Dec. 1 | Fred Lescowski, | Polish, | Miner, | 44 | S. | Pennsylvania, .. | | Leg broken by fall of coal at face of gangway. |

| | | | | | | | | |
|---------|------------------------|----------------|------------------|----|----|--------------------|-----------------|--|
| Dec. 14 | { Julius Blase, | Italian, | Laborer, | 21 | S. | { Scott, | Northumberland. | Burned by gas after firing a shot in a chute they went back to the face and opened shaft when the gas was in the face and started burning by explosion of carbide. While taking carbide from a can he put his head over the can and the carbide being moist exploded. Scalded by steam while he was sitting in fan-house, the piston knocked the cylinder-head off and he was scalded by steam. (Outside.) |
| 16 | { Arto Cavaleri, | Italian, | Miner, | 25 | S. | { Locust Gap, | | |
| | { Joseph Woods, | American, .. | Bottomman, | 18 | S. | | | |
| 18 | Michael Fleming, | American, ... | Fanman, | 57 | M. | Richards, | | |

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Locust Spring Colliery.—Shaft, No. 1, Holmes, East, West and Summit Slopes. Ventilation, drainage and condition as to safety, good.

Locust Gap Colliery.—East, West and Buck Mountain Slopes: Ventilation, drainage and condition as to safety, good.

Alaska and Reliance Collieries.—Ventilation, drainage and condition as to safety, good.

SUSQUEHANNA COAL COMPANY

Pennsylvania Colliery.—Nos. 1 and 5 Slopes: Ventilation, drainage and condition as to safety, good.

Richards Colliery.—Nos. 1 and 4 Tunnels. Ventilation, drainage and condition as to safety, good.

Scott Colliery.—Ventilation, drainage and condition as to safety, good.

COLONIAL COLLIERIES COMPANY

Natalie Colliery.—Nos. 2, 3, and 4 Slopes and Lykens Nos. 1 and 2. Ventilation, drainage and condition as to safety, good.

GREENOUGH RED ASH COAL COMPANY

Greenough Colliery.—Shaft and Drift. Ventilation, drainage and general condition, good.

ENTERPRISE COAL COMPANY

Enterprise Colliery.—Shaft. Ventilation and condition as to safety, fair. Drainage poor.

IMPROVEMENTS

SUSQUEHANNA COAL COMPANY

Pennsylvania Colliery.—A tunnel 8 by 10 feet was driven 38 feet in No. 1 slope, shaft level No. 9 to No. 8 seam.

A tunnel 8 by 10 feet was also driven 155 feet in No. 5 slope, No. 10 to No. 9 seam.

A tunnel 8 by 10 feet was driven 22 feet in No. 4 slope No. 9½ counter, No. 9 to No. 8 seam.

A small tunnel was also driven in No. 1 slope shaft level No. 9½ seam to No. 9 seam.

An electric hoist was installed in No. 4 vein No. 2 slope level west slant slope to take the place of air engines.

No. 2 slope No. 4 seam west was driven 177 feet below first lift for a second lift.

Richards Colliery.—There were 150 new steel cars put into service for the new water level tunnel.

A tunnel 8 by 10 feet was driven 22 feet in No. 4 slope, No. 6 to No. 4 seam.

The new water level tunnel, 8 by 12 feet, was driven 1,011 feet in 1915 and completed.

It was equipped with electric haulage for a distance of 4,000 feet. 16,200 feet of railroad track laid to connect the new water level tunnel with the breaker.

A generator house was built of concrete block, 20 by 19 feet, at the new water level tunnel.

A tunnel has been started in No. 2 slope No. 5 to No. 4 seam, north dip.

A tunnel 8 by 10 feet was driven 20 feet in No. 2 slope, No. 9 to No. 9½ seam.

A new steel bridge, double track, was built for rock and dirt road.

A rock line and hopper, 3 spans, 3 feet wide, 220 feet long, was built to convey material from breaker to bank.

No. 4 fan, a temporary structure, was placed on outcrop of No. 5 vein with mud drift from the outcrop of No. 4 vein, until the air shaft was completed. No. 4 air shaft, 10 by 13 feet inside, of timber, was sunk 235 feet. This fan will ventilate the new water level tunnel and when finished will do away with the No. 4 fan temporarily built.

No. 6 slope extension made to give another lift on that opening, and was sunk 230 feet on 6 degrees dip.

A lamp house 20 by 11 feet was built alongside of generator house at new water level tunnel to take care of lamps from that working.

Scott Colliery.—Ten new steel cars were put into service.

In 1914 a new fan was placed on top of a new air shaft driven up from the anticlinal in No. 8 seam dividing Hickory Ridge and Scott Collieries. This fan, which is of the Vulcan type 10 feet in diameter, with 30 blades 84 by 16 inches and 10 blades 84 by 18 inches, making 168 revolutions per minute, was completed in 1915.

A slush conveyor 80 feet long, 27 by 10 inches, was built to convey material from breaker to bank.

An electric hoist in No. 9 vein plane short hoist was installed to replace compressed air.

A tunnel 8 by 10 feet was driven 90 feet in No. 72 counter No. 9½ to No. 8 seam to cut the No. 8 seam.

No. 4 slope No. 6 seam was driven 620 feet, 12 feet wide, during the year and is expected to prove a basin to which a tunnel is expected to be driven to develop a new lift in several seams.

COLONIAL COLLIERIES COMPANY

Natalie Colliery—Outside. A new steel frame boiler house was built and covered with asbestos protected sheet steel, with steel sash and wire glass windows.

A new 10 inch wood water line 7,500 feet long was laid to supply the Colliery with fresh water.

Two new Simplex jigs and a complete bank of shakers were installed in the breaker.

One new 125 horsepower fire tube boiler was installed in No. 3 boiler house.

Two new fans were installed, one on the Lykens workings driven by a 50 horsepower motor, and one on the White Ash vein driven by a 10 horsepower motor.

An air line was laid and hoisting engines installed preparatory to sinking the Zerbey slope in the Lykens vein west of No. 1 slope.

A 40 horsepower electric hoist was installed at the No. 4 slope in place of an old compressed air hoist.

Inside.—In the No. 1 Lykens slope a rock chute was driven from the No. 1 vein 4th. lift to the No. 2 vein 3rd. lift to bring the 3rd. lift coal to the main slope bottom.

The No. 2 Lykens slope was sunk from the 2nd. to the 4th. lift and preparation made for driving a double track turnout tunnel to the No. 2 Lykens bed.

In the new No. 4 slope the tunnel was continued to cut the No. 6 bed, and a rock hole was also driven that cut the basin of the No. 7 bed in good condition.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen, was held at the Masonic Hall, May 26 and 27. The Board of Examiners was composed of B. I. Evans, Mine Inspector, Mount Carmel; W. R. Reinhardt, Superintendent, Shamokin; James Bateman, Miner, Mount Carmel; James McHugh, Miner, Mount Carmel.

The following persons passed a satisfactory examination and were granted certificates:

MINE FOREMEN

Lawrence Brennan, Shamokin.

ASSISTANT MINE FOREMEN.

William Ball, Charles Trefsgaer, Elmer Umlauf, James Thomas, William Billman, John Gummel, Anthony Dakshaw, Mt. Carmel; Lewis Howells, Michael Galda, Kulpmont; Leo Doyle, Jacob Berger, William Felker, Locust Gap; Anthony Waldron, Shamokin; Clarence Penman, Strong; George W. Horne, Excelsior; John Mowry, Mowry.

SIXTEENTH DISTRICT

NORTHUMBERLAND COUNTY

Shamokin, Pa., February 25, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Sixteenth Anthracite District, for the year ending December 31, 1915.

Respectfully submitted,

P. J. FRIEL,
Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 14 |
| Number of mines, | 44 |
| Number of mines in operation, | 44 |
| Number of tons of coal shipped to market, | 2,436,631 |
| Number of tons used at mines for steam and heat, | 352,474 |
| Number of tons sold to local trade and used by employes, | 73,327 |
| Number of tons produced, | 2,862,432 |
| Number of tons produced by compressed air machines, .. | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 5,337 |
| Number of persons employed outside, | 2,125 |
| Number of fatal accidents inside of mines, | 21 |
| Number of fatal accidents outside, | 1 |
| Number of non-fatal accidents inside of mines, | 34 |
| Number of non-fatal accidents outside, | 12 |
| Number of tons of coal produced per fatal accident inside, | 136,306 |
| Number of tons produced per fatal accident outside, | 2,862,432 |
| Number of tons produced per fatal accident inside and outside, | 130,111 |
| Number of persons employed per fatal accident inside, .. | 254 |
| Number of persons employed per fatal accident outside, . | 2,125 |
| Number of persons employed per fatal accident inside and outside, | 339 |
| Number of persons employed per non-fatal accident inside, | 157 |
| Number of persons employed per non-fatal accident outside, | 177 |
| Number of persons employed per non-fatal accident inside and outside, | 162 |
| Number of wives made widows, | 17 |
| Number of children made orphans, | 42 |
| Number of steam locomotives used inside of mines, | 1 |
| Number of steam locomotives used outside, | 28 |
| Number of compressed air locomotives used inside, .... | ..... |
| Number of compressed air locomotives used outside, .. | ..... |
| Number of electric motors used inside, | 11 |
| Number of electric motors used outside, | 7 |
| Number of gasoline locomotives used inside, | 3 |
| Number of fans in use, | 41 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 26 |
| Number of non-gaseous mines in operation, | 18 |
| Number of new mines opened, | 3 |
| Number of old mines abandoned, ..... | ..... |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|--|-------------------------|
| Philadelphia and Reading Coal and Iron Company, | 1,316,381 |
| Susquehanna Coal Company, | 820,732 |
| Shipman Coal Company, | 243,857 |
| Excelsior Coal Company, | 243,830 |
| Buck Ridge Coal Mining Company, | 120,384 |
| Trevorton Colliery Company, | 117,248 |
| Total, | <u><u>2,862,432</u></u> |

Production by Counties

| | |
|-----------------------|-------------------------|
| Northumberland, | <u><u>2,862,432</u></u> |
|-----------------------|-------------------------|

TABLE B.—Fatal and non-fatal accidents inside and outside of mine; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|--|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| Philadelphia and Reading Coal and Iron Co. | 9 | ..... | 9 | 16 | ..... | 16 | 146,265 | 131,638 | 9,954 | 913 | 8,106 | 959 | ..... | 925 | 456 |
| Susquehanna Coal Co. | 5 | ..... | 5 | 13 | ..... | 13 | 164,166 | 134,132 | 1,796 | 790 | 2,156 | 359 | ..... | 138 | 113 |
| Shippman Coal Co. | ..... | 1 | ..... | ..... | ..... | ..... | 164,189 | 87,286 | 1,780 | 142 | 522 | 157 | ..... | 137 | ..... |
| Excelsior Coal Co. | 3 | ..... | 3 | 3 | ..... | 3 | 81,277 | 60,958 | 416 | 119 | 585 | 139 | ..... | 104 | ..... |
| Buck Ridge Coal Mining Co. | 3 | ..... | 3 | 3 | ..... | 3 | 120,384 | 60,192 | 310 | 102 | 412 | 310 | ..... | 155 | ..... |
| Trevorton Colliery Co. | 1 | ..... | 1 | ..... | 3 | ..... | ..... | 58,624 | 181 | 60 | 241 | ..... | ..... | 91 | 20 |
| Totals and averages, | 21 | 1 | 22 | 34 | 12 | 46 | 136,396 | 84,189 | 5,337 | 2,125 | 7,462 | 254 | 2,125 | 157 | 177 |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| Months | | | | | | | | | | | | | | Totals | Percentages |
|--|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|----|--------|--------|-------------|
| January | February | March | April | May | June | July | August | September | October | November | December | | | | |
| Inside | | | | | | | | | | | | | | | |
| Falls of coal, | 1 | | 1 | | | | | 1 | 1 | | 1 | 5 | 23.81 | | |
| Falls of slate, | | | 1 | 1 | | | 1 | | | 1 | | 3 | 38.19 | | |
| Mine cars, | | | | | | | | | | | | 1 | 4.76 | | |
| Explosions of gas, | 1 | | 1 | | | | | | | 1 | | 2 | 9.52 | | |
| Explosions of powder and dynamite, | | | | | 1 | | | | | | | 1 | 4.76 | | |
| Blasts, premature and otherwise, | | | | | | | | | | | 2 | 2 | 4 | 19.05 | |
| Totals, | 1 | 3 | 1 | 1 | | 1 | | 1 | 1 | 2 | 3 | 21 | 100.00 | | |
| Outside | | | | | | | | | | | | | | | |
| Cars, | | | 1 | | | | | | | | | | 1 | 100.00 | |
| Totals, | | | 1 | | | | | | | | | | 1 | 100.00 | |
| Grand totals inside and outside, | 1 | 4 | 1 | 1 | | 1 | 2 | 2 | 2 | 3 | 3 | 22 | | | |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | | | | | | 2 | 1 | | | 1 | 1 | | 5 | 11.71 |
| Falls of slate, | 1 | | 1 | | | | 1 | | | | | | 3 | 8.82 |
| Falls of roof, | | | | | 1 | | | | | | | | 1 | 2.94 |
| Mine cars, | | | | | | | | 1 | | | | | 1 | 11.77 |
| Explosions of gas, | | | | | | | | | | | | 1 | 1 | 50.59 |
| Explosions of powder and dynamite, | 1 | | | | | | | | 1 | 1 | | 1 | 4 | 11.77 |
| Blasts, premature and otherwise, | | 1 | | | | | | 1 | | | | | 2 | 5.88 |
| Crushed at batteries, . | | | 1 | | | | | 1 | | | | | 2 | 5.88 |
| Mules, | | | 1 | | | | | | | | | | 1 | 12.94 |
| Falling, | | | | | | | | | | | | 1 | 1 | 12.94 |
| Struck by pump, | | | 1 | | | | | | | | | | 1 | 12.94 |
| Struck by pipe, | | | | | | | | 1 | | | | | 1 | 9.94 |
| Struck by piece of rock, .. | | | | | | | | | | 1 | | | 1 | 12.94 |
| Struck by dump, | | | | | | | | | | | 1 | | 1 | 2.94 |
| Totals, | 2 | 1 | 7 | | 1 | 2 | 2 | 4 | 1 | 2 | 1 | 2 | 24 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | | | 1 | | 1 | | | | | | | 2 | 5 | 41.67 |
| Machinery, | | | | | | 1 | | | | | | | 1 | 8.34 |
| Boiler explosions, | | | | | | | | | | 1 | | | 1 | 8.34 |
| Struck by frozen dirt, .. | 1 | | | | | | | | | | | | 1 | 8.33 |
| Struck by timber, | | | | | 1 | | | | | | | | 1 | 8.33 |
| Struck by pole, | | | | | | | | | | | 1 | | 1 | 8.33 |
| Falling, | | | | | | | | | 1 | | | | 1 | 8.33 |
| Kicked by mule, | | | | 1 | | | | | | | | | 1 | 8.33 |
| Totals, | 1 | | 1 | 1 | 2 | 1 | | | 1 | 1 | 1 | 2 | 12 | 100.00 |
| Grand totals inside and outside, | 3 | 1 | 8 | 1 | 3 | 3 | 2 | 4 | 2 | 9 | 2 | 4 | 46 | ..... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| Totals | | | | | | | | | | | | |
| Inside | | | | | | | | | | | | |
| Mine foremen, | | | | | | | | | | | 1 | 1 |
| Miners, | | 1 | 3 | 1 | 1 | | 1 | 1 | 1 | 1 | 4 | 17 |
| Miners' laborers, | | | | | | | | | | | | 1 |
| Loaders, | | | | | | | | 1 | 1 | | | 1 |
| Machine runners, | | | | | | | | | | | | 1 |
| Totals, | | 1 | 3 | 1 | 1 | | 1 | 2 | 2 | 2 | 5 | 21 |
| Outside | | | | | | | | | | | | |
| Slatepickers (boys), | | | 1 | | | | | | | | | 1 |
| Totals, | | | 1 | | | | | | | | | 1 |
| Grand totals inside and outside, | | 1 | 4 | 1 | 1 | | 1 | 2 | 2 | 2 | 5 | 22 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| Totals | | | | | | | | | | | | |
| Inside | | | | | | | | | | | | |
| Miners, | 3 | 1 | 4 | | 1 | 2 | 1 | 1 | 1 | 2 | | 17 |
| Miners' laborers, | | | 1 | | | | | | | | 1 | 2 |
| Drivers and runners, | | | 1 | | | | | | | 1 | | 1 |
| Conductors, | | | | | | | | | | 1 | | 1 |
| Loaders, | | | | | | | 1 | | | 1 | | 1 |
| Repairmen, | | | | | | | | 1 | | | | 1 |
| Timbermen, | | | | | | | | | | | | 1 |
| Starters, | | | 1 | | | | | | | | | 1 |
| Machinists, | | | | | | | | | | | | 1 |
| Pratticemen, | | | | | | | | | | | 1 | 1 |
| Chargeemen, | | | | | | | | | | | | 1 |
| Totals, | 3 | 1 | 7 | | 1 | 2 | 2 | 4 | 1 | 3 | 1 | 34 |
| Outside | | | | | | | | | | | | |
| Foremen, | | | | | | | | | | | | 1 |
| Engineers and firemen, | | | | | | | | | | 1 | | 1 |
| Slatepickers (boys), | | | | | | 1 | | | | | | 1 |
| Laborers, | 1 | | | 1 | | | | | | | | 2 |
| Drivers and runners, | | | 1 | | | | | | | | | 1 |
| Timbermen, | | | | | 1 | | | | | | | 1 |
| Bottommen, | | | | | 1 | | | | | | | 1 |
| Machinists, | | | | | | | | | 1 | | | 1 |
| Electricians, | | | | | | | | | | 1 | | 1 |
| Totals, | 1 | | 1 | 1 | 2 | 1 | | | 1 | 1 | 1 | 12 |
| Grand totals inside and outside, | 3 | 1 | 8 | 1 | 3 | 3 | 2 | 4 | 2 | 9 | 2 | 46 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-----------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| Totals | | | | | | | | | | | | |
| American, | | | | | | | 1 | | | 1 | | |
| German, | | | | | | | | | | | 1 | |
| Polish, | | | | 1 | | | | 1 | | 1 | | |
| Russian, | | 1 | | | 1 | | | | 1 | | | |
| Bohemian, | | | | | | | | | | | | 1 |
| Totals, | | 1 | 1 | 1 | 1 | | 1 | | 2 | 2 | 1 | 1 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| Totals | | | | | | | | | | | | |
| American, | | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 6 | 2 | 4 |
| English, | 1 | | | | | | | | | | | |
| Polish, | 2 | | 6 | | 1 | 1 | 1 | 2 | | | | 1 |
| Hungarian, | | | 1 | | | | | | | | | |
| Italian, | | | | | | | | | | | | 1 |
| Slavonian, | | | | | | | | | | 1 | | 1 |
| Russian, | | | | | | | | | | | | 1 |
| Totals, | 3 | 1 | 8 | 1 | 3 | 3 | 2 | 4 | 2 | 9 | 2 | 8 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Area of furnace bars in square feet | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|--|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|--------------|-----------------|-------------------------------------|----------------------------------|---|--|--|-----------------------------------|
| Philadelphia and Reading Coal and Iron Co. | | | | | | | | | | | | | | | | |
| North Franklin Colliery: | | | | | | | | | | | | | | | | |
| North Franklin No. 1 | Drift, | Non-gas, .. | Fan, | 18 | 6 | 5.5 | 70 | .5 | { Guibal, .. | Electricity, .. | .. | 1 | 86,000 | 62,900 | 87,000 | { 443 |
| North Franklin No. 2 | Slope, | Non-gas, .. | Fan, | 18 | 6.7 | 5.4 | 80 | .5 | { Guibal, .. | Steam, | .. | 1 | 91,500 | 11,400 | 32,800 | { 443 |
| North Franklin No. 3 | Slope, | Gaseous, .. | Fan, | 18 | 6 | 5.4 | 84 | 2.1 | { Guibal, .. | Steam, | .. | 1 | 91,500 | 77,200 | 92,100 | { 443 |
| Bear Valley Colliery: | | | | | | | | | | | | | | | | |
| Bear Valley No. 1 | Shaft, | Gaseous, .. | { Fan, ... | 18 | 6 | 5 | 90 | .8 | Guibal, .. | Steam, | .. | 7 | 55,500 | 52,600 | 56,600 | { 450 |
| Bear Valley No. 2 | Drift, | Non-gas, .. | { Fan, ... | 15 | 5 | 4 | 98 | .8 | Guibal, .. | Electricity, .. | .. | 9 | 42,200 | 36,500 | 43,500 | { 450 |
| Bear Valley No. 3 | Shaft, | Gaseous, .. | Fan, | 6 | 4 | 1.6 | 148 | .7 | Jeffrey, .. | Electricity, .. | .. | 4 | 45,400 | 40,700 | 47,300 | { 450 |
| Bear Valley No. 4 | Slope, | Non-gas, .. | Fan, | 6 | 4 | 1.6 | 148 | .7 | Jeffrey, .. | Electricity, .. | .. | 4 | 45,400 | 40,700 | 47,300 | { 450 |
| Burnside Colliery: | | | | | | | | | | | | | | | | |
| Burnside No. 1 | Drift, | Non-gas, .. | Fan, | 15 | 4.2 | 5.6 | 90 | 1. | { Guibal, .. | Steam, | .. | 4 | 40,600 | 36,000 | 42,000 | { 451 |
| Burnside No. 2 | Shaft, | Gaseous, .. | { Fans, ... | { 15 | { 4 | { 5.4 | { 90 | { 1. | { Guibal, .. | Steam, | .. | { 3 | { 41,300 | { 37,500 | { 42,500 | { 451 |
| Burnside No. 3 | Shaft, | Gaseous, .. | { Fans, ... | { 18 | { 6 | { 5.4 | { 70 | { 1. | { Guibal, .. | Steam, | .. | { 3 | { 34,600 | { 32,000 | { 34,600 | { 451 |
| Stirling Colliery: | | | | | | | | | | | | | | | | |
| Stirling No. 1 | Slope, | Gaseous, .. | 2 Fans, ... | { 21 | { 7.1 | { 6.1 | { 60 | { 1.3 | Guibal, .. | Steam, | .. | 14 | 99,300 | 93,400 | 102,300 | { 292 |
| Stirling No. 2 | Slope, | Gaseous, .. | 2 Fans, ... | { 15 | { 5 | { 4.3 | { 75 | { .9 | Guibal, .. | Steam, | .. | 4 | 56,160 | 24,200 | 57,500 | { 292 |
| Henry Clay Colliery: | | | | | | | | | | | | | | | | |
| Henry Clay No. 1 | Shaft, | Gaseous, .. | 2 Fans, ... | { 21 | { 7 | { 6.3 | { 75 | { 1.4 | Guibal, .. | Steam, | .. | 7 | 51,880 | 47,820 | 52,000 | { 299 |
| Henry Clay No. 2 | Shaft, | Gaseous, .. | 2 Fans, ... | { 15 | { 4 | { 5 | { 120 | { 1.2 | Guibal, .. | Steam, | .. | 7 | 36,020 | 34,810 | 36,800 | { 299 |

TABLE I.—Continued

| | | | |
|------------------------------------|--|-------------|-------------|
| Names of operators and Mines | Number of persons employed inside | 131 | |
| | Number of cubic feet of air per minute passing out at outlet | 33,800 | 31,900 |
| | Total number of cubic feet of air per minute circulating in all the splits | 30,800 | 26,400 |
| | Number of cubic feet of air per minute entering the mine at inlet | 32,900 | 30,800 |
| | Number of splits of air currents | 7 | 8 |
| | Area of furnace bars in square feet | .. | .. |
| Power used | Steam..... | Steam..... | Steam..... |
| | Name of fan | Stine, | Stine, |
| Water gauge developed—in inches | | .7 | .7 |
| | Number of revolutions per minute | 360 | 360 |
| Depth of blades in feet and inches | | 2.1 | 2.1 |
| | Width of blades in feet and inches | 3.1 | 3.1 |
| Diameter of fan in feet and inches | | 7 | 7 |
| | Method of ventilation | { Fan, ... | { Fan, ... |
| Gaseous or non-gaseous | | Non-gas... | Non-gas... |
| | | Non-gas... | Non-gas... |
| Kind of opening | | Drift..... | Drift..... |
| | | Drift..... | Drift..... |
| | Trevorton Colliery Co. | | |
| | Katherine No. 1..... | | |
| | Katherine No. 2..... | | |
| | Katherine No. 3..... | | |

Note.—Two non-gaseous mines ventilated by natural means, no air measurements taken.

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|--|-----------------|--------------------------------|---------------------|--|----------------------------------|----------------------------|
| Philadelphia and Reading Coal and Iron Co. North Anthracite, North Valley, Barnhill, Stirling, Henry Clay, Big Mountain, | Northumberland, | G. B. Hadeedy, | Pottsville, | { P. F. Brennan, Division Supt. John C. Brown, Inside District Supt. Jos. P. Knapp, Outside District Supt. } | { Shamokin, { P. and R. | { P. and R. |
| Susquehanna Coal Co. Cameron, Lake Elbert, Hickory Ridge, Hickory Swamp, Hickory Swamp Washery, .. | Northumberland, | R. A. Quin, | Wilkes-Barre, | W. R. Reinhardt, | Shamokin, | Pennsylvania |
| Shuman Coal Co. Colbert, | Northumberland, | Thomas H. Price, | Wilkes-Barre, | H. H. Kudlish, | Wilkes-Barre, | Pennsylvania |
| Excelsior Coal Co. Corbin, | Northumberland, | George W. Robertson, .. | Shamokin, ..... | ..... | ..... | P. and R. |
| Buck Ridge Coal Mining Co. Buck Ridge, | Northumberland, | Telford Lewis, | Johnstown, | Raymond Lewis, | Shamokin, | P. and R. and Pennsylvania |
| Trevorton Colliery Co. Katherine, | Northumberland, | Clarence T. Starr, ... | Shamokin, ..... | ..... | ..... | P. and R. |

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employes | Total production of coal in tons | Number of days worked | Number of employes | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules used |
|--|-----------------|--|--|---|----------------------------------|-----------------------|--------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|---------------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Philadelphia and Reading Coal and Iron Co. | | | | | | | | | | | | | |
| North Franklin, | Northumberland, | { 311,000 | 22,335 | 6,334 | 350,279 | 258 | 662 | 3 | 4 | 124,635 | 59,175 | ..... | 47 |
| Bear Valley, | | 256,257 | 29,073 | 1,175 | 256,510 | 219 | 630 | ..... | 4 | 156,900 | 69,909 | ..... | 49 |
| Prusside, | | { 294,617 | 54,319 | 15,673 | 364,659 | 215 | { 709 | 3 | ..... | 142,625 | 38,789 | ..... | 89 |
| Struble, ..... |  | ..... | 37,801 | ..... | ..... | 242 | 318 | ..... | 1 | 168,325 | 16,813 | ..... | 77 |
| Henry Clay, | | { 255,674 | ..... | 21,592 | 314,853 | ..... | { 329 | 1 | ..... | 89,590 | 30,478 | 11,650 | ..... |
| Big Mountain, ..... |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 62,760 | 33,750 | 26 | ..... |
| Totals, | | 1,117,534 | 153,563 | 45,284 | 1,316,381 | ..... | 3,166 | 9 | 12 | 679,335 | 238,766 | 11,675 | 262 |
| Susquehanna Coal Co. | | | | | | | | | | | | | |
| Cameron, | Northumberland, | { 294,041 | 42,036 | 15,909 | 351,976 | 189 | 1,095 | 1 | 8 | 73,300 | 34,044 | 21,650 | 93 |
| Lake Fidler, | | 119,536 | 36,130 | 6,528 | 162,194 | 170 | 584 | 3 | 4 | 43,325 | 10,504 | 682 | 58 |
| Hickory Ridge, | | { 228,945 | 40,016 | 842 | 267,863 | 191 | 877 | ..... | 6 | 88,175 | 83,043 | 2,415 | 70 |
| Hickory Swamp, ..... |  | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... |
| Hickory Swamp Washery, | | { 640,522 | 118,172 | 23,289 | 781,882 | ..... | 2,556 | 6 | 20 | 204,800 | 127,591 | 24,808 | 221 |
| ..... |  | { 24,640 | 14,109 | ..... | 38,749 | 178 | 30 | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, | | 665,162 | 182,251 | 23,289 | 850,731 | ..... | 2,586 | 6 | 20 | 204,800 | 127,591 | 24,808 | 221 |
| Shlpman Coal Co., ..... |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Colbert, | Northumberland, | 223,721 | 19,200 | 936 | 243,857 | 280 | 522 | 3 | 3 | 43,850 | 109,000 | ..... | 42 |

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | Locomotives | | | | Total horse power | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors | |
|---|-----------------|-------------------|-------------|---------|-------------|-------------------|----------|-------|-------|-------------------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|----------|
| | | Cylindrical | Horse power | Tabular | Horse power | Total horse power | Gasoline | Steam | Air | | | | | | | | | Electric |
| | | | | | | | | | | | | | | | | | | |
| Philadelphia and Reading Coal and Iron Co., | Northumberland, | ..... | ..... | 65 | 8,125 | 8,125 | ..... | 5 | ..... | 12 | ..... | 145 | 19,104 | 21 | 28,707 | 8,161 | 6 | 6 |
| Susquehanna Coal Co., |  | ..... | ..... | 54 | 7,312 | 7,312 | ..... | 10 | ..... | ..... | ..... | 90 | 8,910 | 20 | 11,220 | 4,068 | 3 | 4 |
| Shipman Coal Co., |  | ..... | ..... | 13 | 2,475 | 2,475 | ..... | 1 | ..... | ..... | ..... | 23 | 1,269 | 3 | 1,536 | 370 | 1 | 1 |
| Excelsior Coal Co., | | 20 | 640 | 4 | 1,250 | 890 | ..... | 10 | ..... | ..... | ..... | 10 | 285 | 3 | 1,808 | 370 | ..... | ..... |
| Buck Ridge Coal Mining Co., |  | ..... | ..... | 11 | 1,535 | 1,535 | ..... | 2 | ..... | ..... | ..... | 18 | 470 | 1 | 1,808 | 950 | ..... | ..... |
| Trevorton Colliery Co., | | | | 3 | 900 | 900 | 1 | | | | | 7 | 470 | | 1 | 1,150 | 100 | ..... | 20 |
| Totals, | ..... | 20 | 640 | 150 | 20,617 | 21,257 | 3 | 29 | ..... | 18 | ..... | 294 | 30,599 | 52 | 44,131 | 14,562 | 10 | 20 |

TABLE 3.—Number of each class of employes inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | Outside | | | | | | | | Grand total | | |
|---|-----------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|--------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|-------------|--------------------|---------------|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employes | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Statepickers (boys) | Statepickers (men) | Bookkeepers and clerks | | All other employes | Total outside |
| Philadelphia and Reading Coal and Iron Co., | Northumberland. | 7 | 4 | 36 | 965 | 404 | 132 | 18 | 15 | 177 | 490 | 2,254 | ..... | 9 | 29 | 130 | 97 | 47 | 18 | 294 | 942 | 3,196 |
| Susquehanna Coal Co., | | 4 | 10 | 36 | 695 | 297 | 122 | 24 | 52 | 50 | 538 | 1,796 | ..... | 4 | 40 | 163 | 256 | ..... | 28 | 279 | 790 | 2,786 |
| Shippan Coal Co., | | 1 | 1 | 3 | 186 | 59 | 39 | 5 | 4 | 132 | ..... | 289 | 1 | 1 | 11 | 15 | 6 | 9 | 4 | 95 | 172 | 727 |
| Excelshor Coal Co., | | 1 | 1 | 1 | 269 | 86 | 37 | ..... | 3 | 47 | ..... | 436 | 1 | 1 | 11 | 17 | 12 | 10 | ..... | 65 | 119 | 755 |
| Back Ridge Coal Mining Co., | | 1 | 1 | ..... | 149 | 62 | 26 | ..... | 6 | 72 | 1 | 319 | 1 | 1 | 7 | 55 | 8 | ..... | 69 | 102 | 412 | 412 |
| Trevorton Colliery Co., | | 1 | 1 | ..... | 95 | 43 | 10 | 1 | ..... | 58 | ..... | 181 | 1 | 1 | ..... | 9 | 8 | 1 | ..... | 22 | 69 | 541 |
| Totals, | | 17 | 61 | 55 | 2,284 | 942 | 351 | 49 | 80 | 446 | 1,651 | 5,337 | 4 | 18 | 161 | 239 | 367 | 65 | 56 | 1,225 | 2,145 | 7,482 |

TABLE 3.—Part 2

| Names of Operators | County | Average Number of Days Worked Monthly | | | | | | | | | | | | |
|---|-----------------|---------------------------------------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|-------|
| | | January | February | March | April | May | June | July | August | September | October | November | December | Total |
| Philadelphia and Reading Coal and Iron Co., | Northumberland, | 14 | 15 | 22 | 22 | 19 | 15 | 15 | 12 | 23 | 24 | 21 | 23 | 239 |
| Susquehanna Coal Co., | | 13 | 16 | 17 | 17 | 13 | 14 | 13 | 12 | 19 | 16 | 20 | 20 | 182 |
| Shipton Coal Co., | | 20 | 24 | 27 | 27 | 27 | 23 | 26 | 20 | 21 | 24 | 24 | 19 | 286 |
| Excelsior Coal Co., | | 13 | 17 | 17 | 17 | 17 | 15 | 18 | 24 | 21 | 22 | 21 | 22 | 166 |
| Pack Ridge Coal Mining Co., | | 17 | 24 | 24 | 24 | 21 | 22 | 18 | 24 | 25 | 24 | 23 | 23 | 197 |
| Trevelton Colliery Co., | | 19 | 14 | 10 | 10 | 17 | 16 | 22 | 14 | 18 | 15 | 21 | 21 | 212 |
| | | | | | | | | | | | | | | |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|-----------|-------------------------|----------------|-----------------|-----|-------------------|------------------|-------------------|----------------------|-----------------|--|
| Feb. 23 | Vasil Hubock, | Russian, | Miner, | 40 | S. | .... | .... | Hickory Ridge, | Northumberland. | Skull fractured by fall of coal near face of breast, died same day. |
| March 9 | George Dietrick, | American, | Slatepicker, .. | 15 | S. | .... | .... | Cameron, | | Fatally injured by gas. A draft of gas ran from the breaker struck the car he was on and threw him off, and the following car ran over him. Died same day, outside. |
| | William Reichold, | American, | Miner, | 42 | S. | .... | .... | North Franklin, .. | | Killed by fall of top slate at face of breast. |
| | Joseph Sobel, | Polish, | Miner, | 42 | M. | .... | 1 | Henry Clay, .. | | Fatally injured by explosion of gas, which he lighted with naked light, near face of breast. Died March 11. |
| 27 | Wally Konetskie, | Polish, | Miner, | 65 | M. | 1 | .... | Big Mountain, .. | | Killed by fall of top slate at face of breast. |
| April 29 | Joseph Andreosavage, .. | Polish, | Miner, | 50 | M. | 1 | 3 | Luke Fidler, .. | | Fatally injured by explosion of bag of powder. He lighted a small piece of fuse to test it, and when he threw it away it exploded a bag of powder in the monkey head. |
| May 25 | Joseph Sokoboskie, ... | Russian, | Miner, | 25 | M. | 1 | 2 | Hickory Swamp, .. | | Fatally injured by explosion of bag of powder. He lighted a small piece of fuse to test it, and when he threw it away it exploded a bag of powder in the monkey head. Died May 31. |
| July Aug. | Edward Lynch, | American, | Miner, | 22 | M. | 1 | 1 | Barnside, | | Killed by fall of slate at face of breast. |
| | Ant. Repovitz, | Polish, | Miner, | 50 | M. | 1 | 8 | Luke Fidler, .. | | Killed by fall of slate while cleaning up counter gangway. |
| 26 | Steve Gilla, | Russian, | Machine runner, | 24 | S. | .... | .... | Colbert, | | Killed by fall of slate in old gangway where he went while waiting for chieftain to start. |
| Sept. 11 | Stefan Lanskis, | Polish, | Miner, | 46 | M. | 1 | 6 | Corbin, | Northampton. | Killed by fall of coal at face of robbing. |
| 14 | Wasil Roma, | Russian, | Loader, | 35 | M. | 1 | .... | Henry Clay, .. | | Fatally injured by runaway car at foot of plane. Died same day. |
| Oct. 1 | Joseph Giesckie, | Polish, | Miner, | 74 | M. | 1 | .... | North Franklin, .. | | Fatally injured by fall of coal at face of breast. Died same day. |
| 28 | Elmer Paul, | American, | Laborer, | 35 | M. | 1 | 4 | Barnside, | | Killed by fall of slate at face of robbing. |
| Nov. 3 | Peter Fedbig, | German, | Miner, | 62 | M. | 1 | .... | Luke Fidler, .. | | Fatally injured by premature explosion of shot at face of robbing. Died November 20. |

TABLE 4. -- Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|--------|------------------------|--------------|---------------------|-----|-------------------|------------------|-------------------|------------------|----------------|---|
| Nov. 8 | John Lenker, | American... | Miner, | 46 | M. | 1 | 2 | Buck Ridge, ... | | Killed by fall of slate at face of robbing. |
| 11 | Auth. Bolonis, | Polish,..... | Miner, | 45 | M. | 1 | 5 | Corbin, | | Killed by premature explosion of shot at face of cut. |
| 12 | Clarence Hoover, | American... | Mine foreman, | 54 | M. | 1 | 1 | Colbert, | | Fatally injured by explosion of gas. He went into abandoned tunnel with naked light and lighted the gas. Died November 18. |
| 17 | Victor Smeltz, | German,..... | Miner, | 28 | S. | 1 | 1 | Colbert, | Northumberland | Killed by fall of slate at face of robbing. |
| Dec. 4 | Frank Beshel, | Belgian... | Miner, | 53 | M. | 1 | 4 | North Franklin, | | to light two shots at the same time. |
| 20 | And. Tarsock, | Polish,..... | Miner, | 25 | M. | 1 | 1 | Burnside, | | Killed by fall of coal at face of breast. |
| 23 | Leo Rifeotski, | Polish,..... | Miner, | 24 | M. | 1 | 5 | Corbin, | | Fatally injured by delayed shot. He thought the squib had missed fire and went back to face of robbing when the shot exploded. Died same day. |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|--------------------------|----------------|--------------------|-----|-------------------|----------------------|-----------------|--|
| Jan. 8 | William Black, | English, | Laborer, | 49 | M. | Cameron, | Northumberland. | Leg fractured. Struck by lump of frozen dirt that fell off bank. Outside. |
| 9 | Anth. Shornakof, | Polish, | Miner, | 28 | M. | Corbin, | | Shoulder fractured by shot fired in next breast which broke through the pillar. |
| Feb. 21 | Philip Vesnietzkie, | Polish, | Miner, | 26 | M. | Hickory Ridge, | | Leg broken by fall of slate at face of breast. |
| 4 | John V. Ney, | American, ... | Miner, | 34 | M. | Stirling, | | Hand and wrist lacerated by premature explosion of shot at face of chute. |
| March 2 | Alex Zelbruskie, | Polish, | Laborer, | 26 | S. | Bear Valley, | | Leg fractured. Struck by a piece of slate that slid down from cheek battery while loading luggies on gangway. |
| 7 | Thomas Quirk, | American, ... | Machinist, | 35 | S. | Colbert, | | Body bruised and arm cut. A pump torped over on him while moving it on slope. |
| 9 | Thomas Sobel, | Polish, | Miner, | 33 | S. | Henry Clay, | | Burned by explosion of gas near face of rubbing. Gas was lighted with naked light. |
| 11 | (Alex Choker, | Polish, | Miner, | 25 | S. | Hickory Ridge, | | Face and hands burned by explosion of gas at face of breast. |
| 12 | George Kania, | Polish, | Miner, | 32 | S. | Luke Fidler, | | Thigh fractured by fall of top slate while barring it down at face of breast. |
| 18 | Louis Catach, | Hungarian, ... | Driver, | 22 | S. | Katherine, | | Leg and three ribs fractured. Struck by heavy mine car. Outside. |
| April 27 | E. Baranvitz, | Polish, | Driver, | 26 | S. | Back Ridge, | | Body bruised. Mule kicked him. |
| 5 | J. W. Berger, | American, ... | Laborer, | 52 | S. | Cameron, | | Two ribs fractured. Mule kicked him while putting the luggies on him. Outside. |
| May 5 | J. W. Berger, | American, ... | Timberman, | 60 | M. | Cameron, | | Leg fractured. Caught between mine car while handling timber. Outside. |
| 15 | Stanley Faturos, | Polish, | Bottomman, | 17 | S. | Luke Fidler, | | Ribs fractured by flying timber. The chain broke while loaded dumpers were being hoisted. Outside. |
| 19 | Stanley Zelinskie, | American, ... | Miner, | 33 | M. | Cameron, | | Leg fractured by fall of clod while putting coal down the chute in breast. |
| June 8 | Samuel Fryberger, | American, ... | Slatopicker, | 11 | S. | Henry Clay, | | Arm torn off by a rope wheel in which he was caught in some unknown manner. He left his place of work in breaker. Outside. |
| | James McGuirk, | American, ... | Miner, | 51 | M. | Hickory Swamp, | | Leg fractured by fall of coal at face of rubbing. |

| | | | | | | | |
|------|----|-------------------------|----------------|--------------------|----|-------------------------|--|
| Oct. | 20 | Milton Eckrot, | American,... | Miner, | 60 | M. Colbert, | Arm broken by piece of rock that slipped out from job at face of robbing. |
| | 24 | Charles Schlegel, | American,... | Fireman, | 43 | M. Cameron, | Leg broken by material flying from a boiler explosion, Outside. |
| | 28 | Edward Clarke, | American,... | Conductor, | 18 | S. Bear Valley, | Foot crushed. He jumped off motor coming out of gangway and his foot was caught under wheel. |
| | 30 | John Gorgy, | Polish,..... | Laborer, | 27 | M. Katherine, | Back bruised by fall of coal at face of gangway. |
| Nov. | 3 | Emery Macaren, | American,... | Laborer, | 24 | S. Bear Valley, | Right arm fractured by fall of coal in chute. |
| | 29 | Benjamin Davis, | American,... | Electrician, | 45 | M. Hickory Ridge, | Leg and two ribs fractured while putting up a pole, the fastener slipped and pole fell on him, Outside. |
| Dec. | 6 | Felix Fesse, | American,... | Miner, | 61 | M. Hickory Swamp, | Two fingers blown off and hand lacerated by explosion of dynamite caps. The caps were tight in his cap box, and to make them loose he struck the box against a rail. |
| | 9 | Joseph Mitchell, | Polish,..... | Runner, | 18 | S. Henry Clay, | Collar bone fractured. Struck by car that jumped off the track, Outside. |
| | 12 | John Makatagan, | Slavonian,... | Chargeman, | 33 | M. Buck Ridge, | Face and hands burned by explosion of gas at face of airway. He went to face with naked light. |
| | 14 | John Bancuskie, | Russian, | Miner, | 45 | M. Corbin, | Leg fractured by falling over a lump of coal at face of robbing while trying to get away from a threatened fall of top. |
| | 21 | George M. Kline, | American,... | Foreman, | 55 | M. Katherine, | Three ribs fractured. Struck by rock chumper at foot of rock plane, Outside. |
| | 23 | Thomas O'Brien, | American,... | Driver, | 29 | S. Bear Valley, | Top of finger cut off. While hitching spreader to car on gangway, the male started and his finger was caught by spreader. |
| | 29 | James McGinnis, | American,... | Driver, | 23 | S. Katherine, | Leg crushed by falling under cars while trying to jump on moving cars on rock bank, Outside. |
| | 30 | Angelo Sando, | Italian,..... | Bratticeman, | 23 | M. Hickory Ridge, | Face and hands burned by gas. He went into an old breast with naked light and lighted small body of gas. |

Northumberland.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

North Franklin, Bear Valley, Stirling, Henry Clay and Big Mountain Collieries.—Ventilation, drainage and condition as to safety, good.

Burnside Colliery.—Ventilation and drainage, good. Condition as to safety, fair.

SUSQUEHANNA COAL COMPANY

Cameron, Luke Fidler, Hickory Ridge and Hickory Swamp Collieries.—Ventilation, drainage and condition as to safety, fair.

SHIPMAN COAL COMPANY

Colbert Colliery.—Ventilation and condition as to safety, fair. Drainage poor.

EXCELSIOR COAL COMPANY

Corbin Colliery.—Ventilation, drainage and condition as to safety, fair.

BUCK RIDGE COAL MINING COMPANY

Buck Ridge Colliery.—Ventilation good. Drainage and condition as to safety, fair.

TREVORTON COLLIERY COMPANY

Katherine Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

North Franklin Colliery.—An electric haulage system was installed in the first lift of the Short slope. An ash-wash system was installed in the boiler house for handling the ashes.

Bear Valley Colliery.—Tunnels were driven as follows: One 117 feet long in the second lift of No. 2 underground slope from No. 5 to No. 4 vein; one 110 feet long in the first lift of No. 2 underground slope from No. 5 to No. 4 vein; one 152 feet long in the rock slope from No. 8½ to No. 9 vein; one 524 feet long from foot of rock slope to No. 7 vein; one 164 feet long in rock slope from No. 8½ to No. 9 vein; also air tunnel 109 feet long in rock slope from No. 8½ to No. 9 vein; and air tunnel 381 feet long in rock slope from No. 10 to 8½ vein.

An electric haulage system 3,000 feet long was installed in rock slope; also electric hoist installed at rock slope.

A concrete arch 102 feet long was built at top of rock slope.

Burnside Colliery.—A tunnel 91 feet long was driven in the third lift shaft section from No. 9 to No. 8 vein.

A miner's washhouse 25 by 43 feet was built of concrete and brick and equipped with shower baths and lockers.

Stirling Colliery.—A tunnel 427 feet long was driven in No. 3 underground slope, first lift, from No. 5 to No. 7 vein.

Henry Clay Colliery.—A new refuse plane was built from breaker.

Big Mountain Colliery.—A tunnel 185 feet long was driven in water level from No. 5 to No. 4 vein.

SUSQUEHANNA COAL COMPANY

Cameron Colliery.—Tunnels were driven as follows: One, 5 by 6 feet, and 40 feet long in the east drift from No. 5 to No. 4 vein; one 40 feet long in No. 1 slope from No. 5 to No. 6 vein; one 160 feet long in east drift from No. 4 to No. 4 vein to connect the vein that had parted; one 47 feet long in the west drift from No. 8 to No. 5 vein; and one 175 feet long in No. 3 slope from No. 5 to No. 8 vein.

Luke Fidler Colliery.—A tunnel 250 feet long was driven in No. 1 shaft from No. 4 vein north dip to No. 4 vein south dip.

Hickory Ridge Colliery.—An electric light line 4,100 feet long was erected between the colliery and No. 6 slope, and the colliery will soon be supplied with electric lights.

No. 1 tunnel was skipped 6 feet for a distance of 150 feet.

SHIPMAN KOAL COMPANY

Colbert Colliery.—A tunnel 285 feet long was driven from No. 9½ to No. 11 vein; tunnel 65 feet long from No. 5 to No. 4 vein; and tunnel 350 feet long from No. 8 to No. 4 vein.

A bore hole was sunk from the surface to No. 5 vein for return of breaker water.

Two 8-ton Whitcomb gasoline motors were installed from main haulage.

A slope was sunk 300 feet in No. 5 vein connecting first level east and shaft level.

Outside: A new steel frame boiler house was erected, containing three sets of B. and W. Stirling boilers complete.

One new air compressor was installed.

The shaft engines were moved to a new foundation and a new engine house erected.

BUCK RIDGE COAL MINING COMPANY

Buck Ridge Colliery.—An underground slope has been sunk in No. 1 slope workings, in the No. 5 vein, a distance of 300 feet.

A rock airway has been driven 300 feet to the surface.

MINE FORMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in Shamokin, May 18 and 19. The Board of Examiners was composed of P. J.

Friel, Mine Inspector, Shamokin; Edward Brennan, Superintendent, Shamokin; Alexander Bradley, Miner, Shamokin; Nicholas Davis, Miner, Shamokin.

The following persons passed a satisfactory examination and were granted certificates:

MINE FOREMEN

George W. Lewis, Charles H. Eyster, Jesse C. Hoover, Shamokin; Oliver Tasker, Sagon.

ASSISTANT MINE FOREMEN

George E. Sullivan, Howard Bixler, John Fleming, John Donnelly, Shamokin; Joseph Yeziorskie, Peter Yojo, Ranshaw.

SEVENTEENTH DISTRICT

CARBON AND SCHUYLKILL COUNTIES

Lansford, Pa., February 28, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Seventeenth Anthracite District, for the year ending December 31, 1915.

Respectfully submitted,

ISAAC M. DAVIES,

Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 10 |
| Number of mines, | 44 |
| Number of mines in operation, | 44 |
| Number of tons of coal shipped to market, | 4,100,675 |
| Number of tons used at mines for steam and heat, | 576,864 |
| Number of tons sold to local trade and used by employes, | 30,382 |
| Number of tons produced, | 4,707,921 |
| Number of tons produced by compressed air machines, .. | ..... |
| Number of tons produced by electrical machines, .... | ..... |
| Number of persons employed inside of mines, | 6,406 |
| Number of persons employed outside, | 2,946 |
| Number of fatal accidents inside of mines, | 21 |
| Number of fatal accidents outside, | 7 |
| Number of non-fatal accidents inside of mines, | 14 |
| Number of non-fatal accidents outside, | 3 |
| Number of tons of coal produced per fatal accident inside, | 224,187 |
| Number of tons produced per fatal accident outside, ... | 672,560 |
| Number of tons produced per fatal accident inside and outside, | 168,140 |
| Number of persons employed per fatal accident inside, .. | 305 |
| Number of persons employed per fatal accident outside, .. | 421 |
| Number of persons employed per fatal accident inside and outside, | 334 |
| Number of persons employed per non-fatal accident inside, | 458 |
| Number of persons employed per non-fatal accident outside, | 982 |
| Number of persons employed per non-fatal accident inside and outside, | 550 |
| Number of wives made widows, | 13 |
| Number of children made orphans, | 30 |
| Number of steam locomotives used inside of mines, .... | ..... |
| Number of steam locomotives used outside, | 51 |
| Number of compressed air locomotives used inside, | 2 |
| Number of compressed air locomotives used outside, .... | ..... |
| Number of electric motors used inside, | 81 |
| Number of electric motors used outside, ..... | ..... |
| Number of gasoline locomotives used inside, ..... | ..... |
| Number of fans in use, | 22 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 20 |
| Number of non-gaseous mines in operation, | 24 |
| Number of new mines opened, | 2 |
| Number of old mines abandoned, | 4 |

TABLE A

PRODUCTION OF COAL

Names of Operators

Tons

| | |
|---|-------------------------|
| Lehigh Coal and Navigation Company, | 4,094,662 |
| Coxe Brothers and Company, Inc., | 319,933 |
| Estate A. S. Van Wickle, | 264,352 |
| Evans Colliery Company, | 25,644 |
| Elmer Neyer, | 3,330 |
| Total, | <u><u>4,707,921</u></u> |

Production by Counties

| | |
|-------------------|-------------------------|
| Carbon, | 2,921,026 |
| Schuylkill, | 1,786,895 |
| Total, | <u><u>4,707,921</u></u> |

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|---------------------------------------|-----------------|---------|-------|---------------------|---------|-------|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | |
| Lehigh Coal and Navigation Co., | 19 | 7 | 26 | 13 | 2 | 15 | 215,508 | 5,645 | 2,507 | 8,153 | 297 | 358 | 424 | 1,253 |
| Coke Brothers, and Co., Inc., | 1 | ..... | 1 | ..... | ..... | ..... | 319,823 | 299 | 175 | 474 | 599 | ..... | ..... | ..... |
| Estate A. S. Van Winkle, ..... | ..... | ..... | ..... | 1 | ..... | 1 | 264,552 | 408 | 219 | 627 | ..... | ..... | 219 | ..... |
| Evans Colliery Co., | 1 | ..... | 1 | ..... | 1 | 1 | 25,644 | 49 | 41 | 90 | 49 | ..... | ..... | 41 |
| Miscellaneous Companies, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 5 | 4 | 9 | ..... | ..... | ..... | ..... |
| Totals and averages, | 21 | 7 | 28 | 14 | 3 | 17 | 224,187 | 6,406 | 2,946 | 9,352 | 305 | 421 | 458 | 983 |

Names of Operators

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | 4.76 |
| Falls of roof, ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | 1 | 19.05 |
| Mine cars, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4.76 |
| Explosions of gas, .... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4.76 |
| Suffocation by gas, etc. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3 | ..... | ..... | 3 | 11.29 |
| Blasts, premature and otherwise, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | ..... | 2 | 9.52 |
| Falling into slopes, etc., | 1 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 3 | 14.29 |
| Crushed at batteries, .. | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4.76 |
| Falling into sump, .... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4.76 |
| Electricity, | 1 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | ..... | 3 | 14.29 |
| Rush of coal, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4.76 |
| Totals, | 2 | 2 | ..... | 4 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 21 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 2 | 28.57 |
| Machinery, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 14.29 |
| Suffocation in chutes, etc., ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 14.29 |
| Scalded by steam, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 14.29 |
| Spool of rope rolled on him, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Struck by shaft guide, .. | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | 14.29 |
| Totals, | 1 | ..... | 2 | 2 | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | 7 | 100.00 |
| Grand totals inside and outside, | 3 | 2 | 2 | 6 | 1 | 1 | 1 | 3 | 2 | 1 | 2 | 1 | 28 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 2 | 14.29 |
| Mine cars, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | 2 | 14.29 |
| Explosions of gas, .... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4 | 28.57 |
| Blasts, premature and otherwise, | 2 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 5 | 35.71 |
| Falling, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 7.11 |
| Totals, | 3 | 1 | ..... | 1 | 1 | ..... | 2 | ..... | 1 | 2 | 1 | 2 | 14 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Machinery, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 33.33 |
| Struck by timber, .... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | 33.33 |
| Struck by pump, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 33.34 |
| Totals, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 | 3 | 100.00 |
| Grand totals inside and outside, | 4 | 1 | ..... | 1 | 1 | ..... | 2 | ..... | 2 | 2 | 1 | 3 | 17 | ..... |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | |
|-------------------|--------|----------|----------|---------|-----------|--------|------|------|-----|-------|-------|----------|---------|
| | Totals | December | November | October | September | August | July | June | May | April | March | February | January |
| | | | | | | | | | | | | | |
| American | 7 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| English, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Polish, | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Italian, | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Slavonian, | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lithuanian, | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Austrian, | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Russian, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Greek, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Totals, | 28 | 1 | 2 | 4 | 2 | 3 | 1 | 1 | 1 | 6 | 2 | 2 | 2 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | |
|-------------------|--------|----------|----------|---------|-----------|--------|------|------|-----|-------|-------|----------|---------|
| | Totals | December | November | October | September | August | July | June | May | April | March | February | January |
| American, | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| Polish, | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Italian, | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Slavonian, | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lithuanian, | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Greek, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Totals, | 17 | 3 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 4 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gascons or non-gascons | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|---------------------------------------|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|---------------------|--------------------|----------------------------------|---|--|--|-----------------------------------|
| Ledigh Coal and Navigation Co. | | | | | | | | | | | | | | | |
| Nesquehoning Colliery: | Tunnel... | Gascons... | Fan, Natural... | 24.0 | 7.0 | 6.0 | 90 | 2.5 | Guibal, | Steam, | 19 | 165,718 | 104,111 | * | 348 |
| Number 1, | Shaft, | Gascons... | Fan, | 21.7 | 7.0 | 2.3 | 60 | 1.4 | Guibal, ... | Steam, | 19 | 267,695 | 216,819 | 333,034 | 439 |
| Number 2, | Drift, | Gascons... | Natural, | 24.0 | 7.0 | 6.0 | 90 | 2.5 | Guibal, ... | Steam, | 1 | 5,973 | 5,973 | 6,302 | 17 |
| Number 3, | Tunnel... | Gascons... | Natural, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4 | 24,550 | 19,240 | * | 59 |
| Lansford Colliery: | | | | | | | | | | | | | | | |
| Number 4, | Shaft, | Gascons... | Fan, | 24.0 | 8.0 | 7.0 | 86 | 2.0 | Sturtevant, | Electricity, | 6 | 80,640 | 80,640 | 80,659 | 276 |
| Number 4, West Barrier, | Slope, | Gascons... | Fan, | 9.0 | 3.0 | 0.7 | 168 | 2.2 | Sirocco, ... | Electricity, | 2 | 26,156 | 26,156 | 26,291 | 68 |
| Number 5, | Shaft, | Gascons... | Fan, | 10.0 | 5.0 | 0.8 | 108 | 1.3 | Sirocco, ... | Electricity, | 2 | 37,400 | 37,400 | 37,535 | 108 |
| Number 4, Black Rock, | Slope, | Gascons... | Fan, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 39,686 | 39,686 | 439,190 | 158 |
| Number 5, | Shaft, | Gascons... | Fan, | 21.0 | 7.0 | 6.6 | 49 | 1.1 | Guibal, ... | Steam, | 1 | 25,750 | 25,750 | 25,755 | 92 |
| Number 5, | Shaft, | Gascons... | Fan, | 22.0 | 8.0 | 6.0 | 87 | 1.4 | Guibal, ... | Steam, | 1 | 21,930 | 21,930 | 21,960 | 59 |
| Number 6, | Shaft, | Gascons... | Natural, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 65,001 | 60,697 | 66,584 | 206 |
| Coaldale Colliery: | | | | | | | | | | | | | | | |
| Number 8, | Shaft, | Gascons... | Fan, | 24.0 | 8.0 | 6.0 | 70 | 1.2 | Guibal, ... | Steam, | 4 | 56,358 | 50,358 | 79,034 | 228 |
| Number 8, | Slope, | Gascons... | Fan, | 12.0 | 4.0 | 4.0 | 80 | 1.2 | Sturtevant, | Steam, | 1 | 28,329 | 20,250 | 28,360 | 16 |
| Number 9, | Shaft, | Gascons... | Natural, | 20.0 | 8.0 | 6.0 | 84 | 1.8 | Sturtevant, | Steam, | 9 | 90,792 | 90,000 | 90,271 | 262 |
| Springdale, | Tunnel... | Non-gas... | Fan, | 7.0 | 2.6 | 10.0 | 95 | 0.3 | American Blower. | Steam, | 1 | 28,360 | 25,124 | 111,000 | 27 |

*Not reported.
†Air lost on way to Outlet through old mine breaches.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|-----------------------------------|-------------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Lefligh Coal and Navigation Co. | | | | | | | | | | | | | |
| Nesquehoning, | Carbon, | 818,045 | 69,405 | 6,368 | 893,818 | 553 | 1,564 | 4 | 1 | ..... | 283,979 | 176,821 | 50 |
| Lansford, | Carbon, | 800,488 | 113,972 | 875 | 954,296 | 229 | 2,222 | 9 | 10 | ..... | 258,573 | 117,981 | 53 |
| Caldale, | Carbon, | 680,223 | 60,017 | 2,457 | 742,757 | 242 | 1,470 | 5 | ..... | ..... | 186,419 | 114,789 | 59 |
| Greenwood, | Schuylkill, | 346,776 | 37,593 | 4,267 | 388,990 | 279 | 807 | 4 | 1 | ..... | 105,300 | 47,841 | 25 |
| Rain, | Schuylkill, | 401,832 | 57,426 | 88 | 459,356 | 559 | 395 | 4 | ..... | ..... | 130,001 | 49,097 | 20 |
| Tamqua, | Schuylkill, | 231,235 | 61,421 | 559 | 292,915 | 219 | 836 | 3 | ..... | ..... | 196,789 | 41,82 | 1 |
| | | 3,387,699 | 420,145 | 14,314 | 3,822,158 | ..... | 7,961 | 26 | 17 | ..... | 1,137,732 | 482,411 | 117 |
| Washeries | | | | | | | | | | | | | |
| Caldale, | Schuylkill, | 27,921 | 13,269 | ..... | 50,490 | 79 | 134 | ..... | ..... | ..... | 50 | 4,45 | 3 |
| Greenwood,* | Schuylkill, | 154,337 | 55,582 | 3,755 | 212,011 | 273 | 61 | ..... | ..... | ..... | ..... | 8,600 | 1 |
| Hauto, | Carbon, | 189,528 | 69,171 | 3,795 | 262,504 | ..... | 218 | ..... | ..... | ..... | 50 | 12,45 | 1 |
| Totals, | | 3,577,257 | 499,296 | 18,109 | 4,094,662 | ..... | 8,172 | 56 | 17 | ..... | 1,137,782 | 694,83 | 251 |
| Cave Brothers and Co., Inc. | | | | | | | | | | | | | |
| Beaver Meadow, | Carbon, | 295,558 | 20,029 | 4,346 | 319,933 | 246 | 471 | 1 | ..... | 29,457 | 188,170 | ..... | 35 |
| Estate A. S. Van Winkle | | | | | | | | | | | | | |
| Coleraine, | Carbon, | 210,746 | 49,491 | 4,115 | 264,352 | 101 | 627 | ..... | 1 | 23,759 | 79,275 | ..... | 61 |

*Coal prepared at Rahn.

TABLE 2.—Continued

| Names of Operators and Collieries | County | Number of horses and mules | | |
|---|---------------|----------------------------|---|-----------|
| | | Explosives | Number of pounds of permissible explosives used | |
| | | | Number of pounds of dynamite used | |
| | | | Number of pounds of powder used | |
| Evans, | Carbon, | | 5 | ..... |
| Black Rock, | Carbon, | | 700 | ..... |
| Grand totals, ..... | ..... |  | 495,730 | 35 |
| Evans Colliery Co. | Carbon, | 24,325 | ..... | ..... |
| Elmer Neyer | Carbon, | 300 | ..... | ..... |
| Grand totals, ..... | ..... | ..... | 1,429,417 | 41,545 |
| Number of non-fatal accidents | | 1 | ..... | 17 |
| Number of fatal accidents | | 1 | ..... | 28 |
| Number of employes | | 90 | ..... | 9,352 |
| Number of days worked | | 173 | ..... | 163 |
| Total production of coal in tons | | 25,614 | ..... | 3,230 |
| Number of tons sold to local trade and used by employes | | 530 | ..... | 3,382 |
| Number of tons used at collieries for steam and heat | | 8,000 | ..... | 48 |
| Number of tons of coal shipped to market | | 17,114 | ..... | 4,106,675 |

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | Locomotives | | | | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors | |
|---------------------------------|-------------|-------------------|-------------|---------|-------------|-------------------|----------|-------|-----|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|----------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Air | | | | | | | | Electric |
| Ledwith Coal and Navigation Co. | Carbon, | 3 | 186 | 59 | 22,472 | 22,658 | ... | 41 | ... | 81 | 102 | 323,944 | 26 | 37,859 | 11,359 | 11 | 10 |
| Coxe Brothers and Co., Inc. | Schuylkill, | ... | ... | 8 | 2,000 | 2,000 | ... | 4 | 2 | ... | 29 | 1,570 | 1 | 1,260 | 1,100 | 1 | 1 |
| Estate A. S. Van Winkle, | Carbon, | ... | ... | 18 | 1,130 | 2,130 | ... | 6 | ... | ... | 36 | 1,340 | ... | 7,317 | 3,485 | 1 | ... |
| Eyams Colliery Co., | Carbon, | ... | ... | ... | 709 | 709 | ... | ... | ... | ... | 6 | 187 | ... | 3,000 | 1,000 | ... | ... |
| Elmer Neyer, | Carbon, | ... | ... | 1 | 35 | 35 | ... | ... | ... | ... | 7 | 39 | ... | ... | ... | ... | ... |
| Totals, | | 3 | 186 | 119 | 27,337 | 27,543 | ... | 51 | 2 | 81 | 165 | 371,119 | 39 | 49,106 | 17,455 | 13 | 12 |

TABLE 3.—Number of each class of employes inside and outside of mines

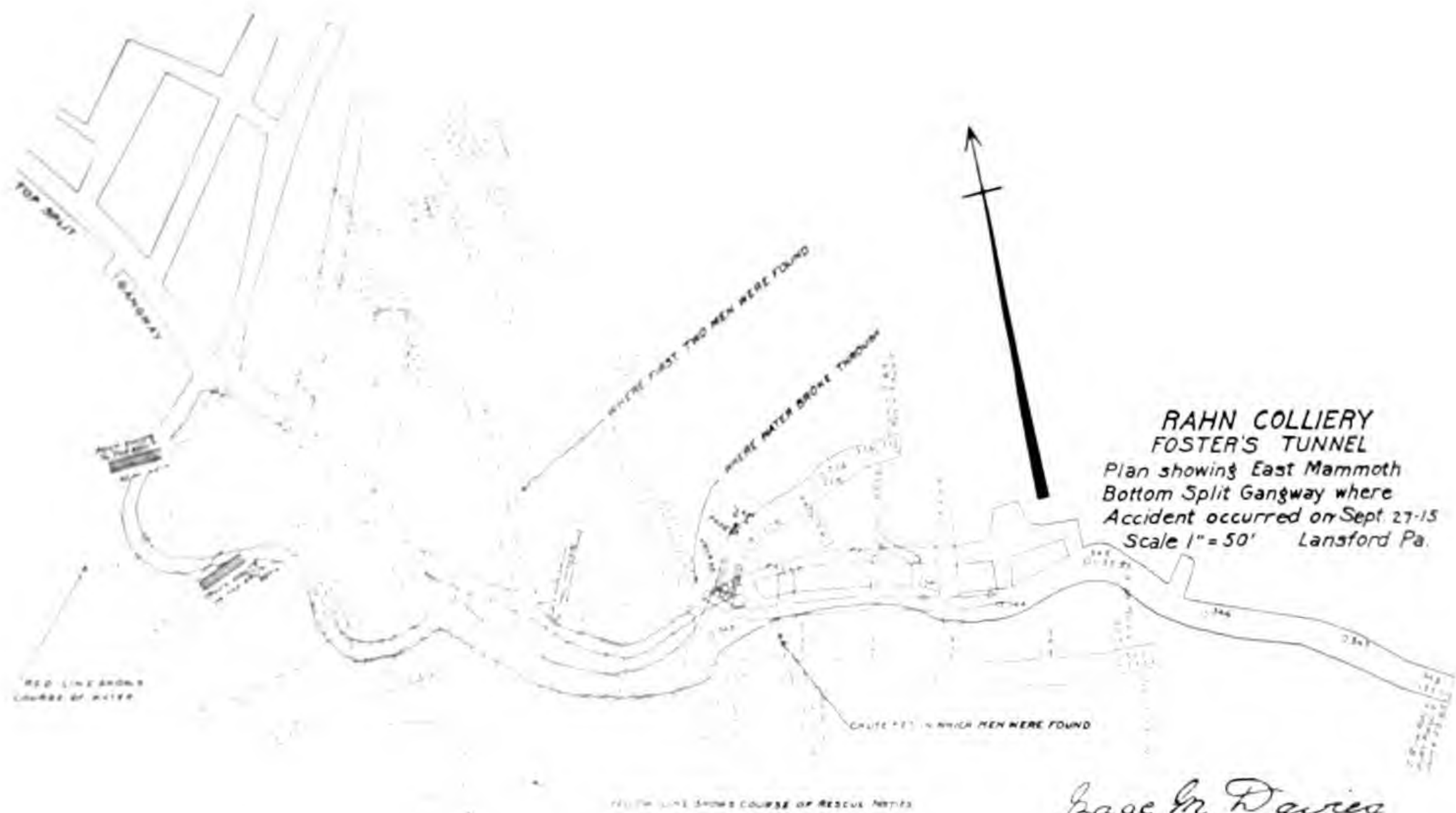
| Names of Operators | County | Inside | | | | | | | | | | Outside | | | | | | | | | | Grand total | |
|--------------------------------|------------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|--------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|--------------------|---------------|-------------|--|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employes | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | Bookkeepers and clerks | All other employes | Total outside | | |
| Lehigh Coal and Navigation Co. | Carbon, | 23 | 22 | 59 | 1,608 | 404 | 216 | 63 | 13 | 2,042 | 1,185 | 5,645 | 4 | 17 | 230 | 267 | 132 | 196 | 40 | 1,621 | 2,507 | 8,152 | |
| Coxe Brothers and Co., Inc. | Schuykill, | 1 | 4 | ... | 199 | 45 | 14 | 6 | 1 | 7 | 22 | 289 | ... | 1 | 17 | 14 | 34 | 10 | 4 | 99 | 175 | 474 | |
| Estate A. S. Van Winkle. | Carbon, | 1 | 3 | 2 | 117 | 121 | 27 | 3 | 6 | 68 | 19 | 408 | 1 | 4 | 4 | 19 | 22 | 7 | 8 | 132 | 219 | 627 | |
| Evans Colliery Co., | Carbon, | 1 | ... | ... | 21 | 14 | 3 | ... | 3 | 7 | ... | 49 | ... | 1 | 2 | 6 | 20 | 2 | ... | 10 | 41 | 90 | |
| Elmer Neyer, | Carbon, | ... | ... | ... | 2 | 3 | ... | ... | ... | ... | ... | 5 | ... | ... | ... | 1 | ... | ... | ... | 3 | 4 | 9 | |
| Totals, | | 26 | 29 | 62 | 1,977 | 537 | 260 | 72 | 22 | 2,121 | 1,235 | 6,466 | 5 | 23 | 264 | 314 | 298 | 215 | 52 | 1,865 | 2,946 | 9,352 | |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|------------------------|------------------|------------------|-----|-------------------|------------------|-------------------|------------------|------------------|---|
| Jan. 5 | Paul Pistoek, | Greek, | Company man, .. | 22 | ✓ | ... | ... | Rahn, | Schuykill, | Killed by falling into chute, breaking his neck. |
| 19 | Oscar Strohl, | American, | Machine boss, .. | 24 | M. | 1 | 1 | Nesquehoning, .. | Carbon, | Fatally scalded by escaping boiler steam. Outside. |
| 28 | John Wood, | Polish, | Company man, .. | 28 | ✓ | ... | ... | Lansford, | Carbon, | Killed by falling on electric wire. |
| Feb. 17 | Joe Kelsosky, | Polish, | Miner, | 23 | ✓ | ... | ... | Lansford, | Carbon, | Suffocated by rush of fine coal in chute. |
| 19 | Peter Pavlisim, | American, | Miner, | 46 | M. | 1 | 8 | Rahn, | Schuykill, | Killed by falling down a pumpway. |
| March 3 | Peter Romane, | Italian, | Company man, .. | 19 | ✓ | ... | ... | Lansford, | Carbon, | Killed by a spool of rope falling on him. |
| 27 | Joseph Broslin, | American, | Electrician, .. | 26 | ✓ | ... | ... | Nesquehoning, .. | Carbon, | Killed by falling into top elevator. His body was found on shaker. Outside. |
| April 8 | John Samers, | American, | Carpenter, | 54 | W. | ... | 1 | Nesquehoning, .. | Carbon, | Head crushed between ears. Outside. |
| 11 | Conry Mahan, | Bosnian, | Laborer, | 42 | M. | 1 | ... | Rahn, | Schuykill, | Suffocated in ash chute. Outside. |
| 13 | George Macario, | Slovakian, | Miner, | 38 | M. | 1 | 5 | Evans, | Carbon, | Killed by fall of roof at face of breast. |
| 29 | Alfred Szassko, | Polish, | Laborer, | 22 | ✓ | ... | ... | Lansford, | Carbon, | Killed by being caught between gangway leg and car. |
| 29 | Joe Marcavage, | Lithuanian, .. | Miner, | 46 | M. | 1 | 4 | Tamaqua, | Schuykill, | Killed by having his head caught by rock in battery. |
| | Steve Seruka, | Slavonian, | Laborer, | 47 | M. | 1 | ... | Lansford, | Carbon, | Killed by fall of rock near face of gangway. |
| May 19 | Andy Liench, | Lithuanian, .. | Miner, | 36 | ✓ | ... | ... | Tamaqua, | Schuykill, | Partly injured by an explosion of gas in battery. Died the following day. |
| June 5 | Mike Ullmanic, | Slavonian, | Laborer, | 35 | M. | 1 | 3 | Greenwood, | Schuykill, | Fatally injured by falling into sump. Died the following day. |
| July 23 | Metro Trer, | Austrian, .. | Miner, | 38 | M. | 1 | 6 | Caldale, | Schuykill, | Instantly killed either by electric shock or asphyxy. |
| Aug. 8 | Robert Weaver, | American, | Loader boss, .. | 25 | M. | 1 | ... | Greenwood, | Schuykill, | Killed by being struck by shaft guide. Outside. |
| 9 | Jos. Vutzeavage, | Lithuanian, .. | Miner, | 26 | M. | 1 | 1 | Tamaqua, | Schuykill, | Killed by premature blast at face of breast. |
| 17 | Daniel West, | American, | Miner, | 22 | M. | 1 | ... | Rahn, | Schuykill, | Killed by fall of coal at face of breast. |
| Sept. 10 | Walter Herrom, | American, | Runner, | 26 | ✓ | ... | ... | Greenwood, | Schuykill, | Killed by cars. Outside. |
| 28 | Max Micolush, | Italian, | Driver, | 18 | ✓ | ... | ... | Caldale, | Schuykill, | Killed by fall of roof near face of tunnel. |
| Oct. 7 | Nick Neatch, | Polish, | Laborer, | 20 | ✓ | ... | ... | Lansford, | Carbon, | Killed by fall of roof in gangway. |

TABLE 5.—Non-fatal accidents inside and outside of mines

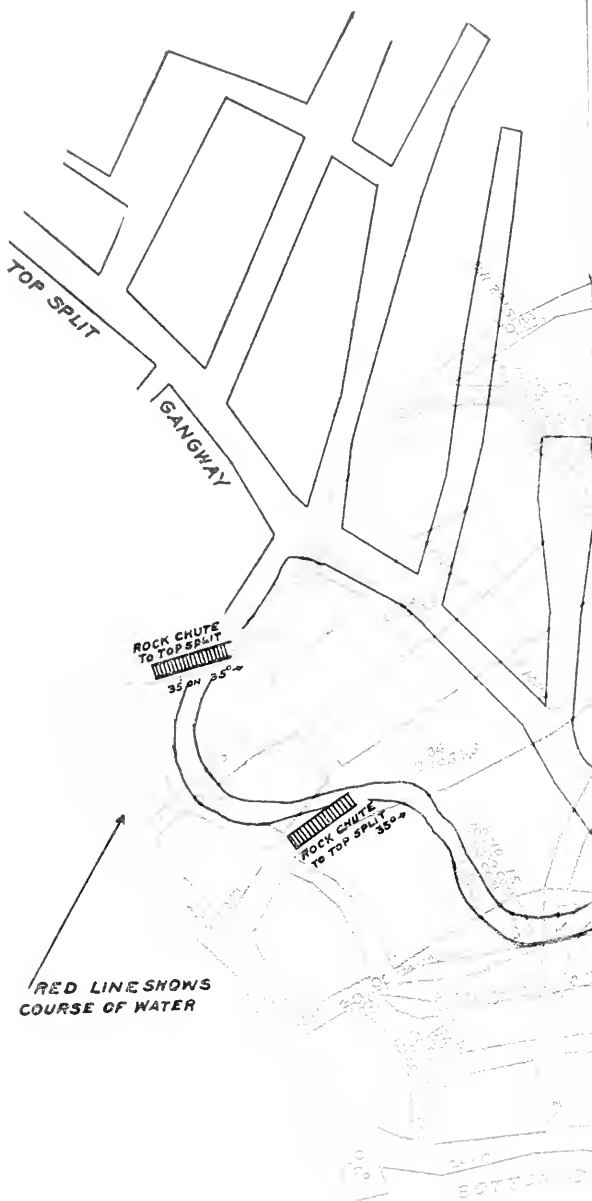
| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|------------------------|----------------|---------------------|-----|-------------------|------------------|------------------|---|
| Jan. 14 | John Tarapeak, | American, .. | Statepicker, | 15 | S. | Evans, | Carbon, | Leg crushed in rolls and afterwards amputated. Outside. |
| Jan. 19 | Albert Sciosso, | American, .. | Chargeman, | 35 | M. | Lansford, | Carbon, | Face and body injured by premature blast. |
| Feb. 18 | Charles Lawrence, .. | Italian, | Machine runner, .. | 23 | M. | Lansford, | Carbon, | Face and body injured by premature blast. |
| Feb. 17 | Mike Bosia, | Slavonian, .. | Laborer, | 23 | S. | Coleraine, | Carbon, | Shoulder injured by falling block of coal. |
| Feb. 17 | Angelo Chiska, | Italian, | Company man, | 27 | M. | Lansford, | Carbon, | Shoulder injured by block of coal that fell from roof at face of gangway. |
| April 15 | William Barrell, | American, .. | Miner, | 35 | M. | Tamaqua, | Schuykill, | Head and face injured by explosion of blast. |
| May 19 | Emoch Ambrosio, | Lithuanian, .. | Miner, | 28 | S. | Tamaqua, | Schuykill, | Hands, face and body burned by explosion of gas. |
| July 14 | Martin Pilla, | Polish, | Miner, | 26 | M. | Lansford, | Carbon, | Hands and face burned by explosion of gas. |
| Sept. 9 | Valter Stammek, | Polish, | Laborer, | 21 | S. | Lansford, | Carbon, | Polvis fractured by ears. |
| Sept. 9 | Mike Tomlinson, | Slavonian, .. | Smith helper, | 26 | S. | Nequehoning, .. | Schuykill, | Leg fractured while unloading timber on timber wharf. Outside. |
| Oct. 11 | George Yeselsky, | Lithuanian, .. | Laborer, | 62 | S. | Tamaqua, | Schuykill, | Leg fractured while entering a car. |
| Oct. 12 | Mike Lape, | Slavonian, .. | Runner, | 23 | M. | Lansford, | Carbon, | Body injured by fall of coal at face of next chute. |
| Oct. 12 | George Martin, | Lithuanian, .. | Miner, | 58 | M. | Greenwood, | Schuykill, | Head injured by blast that came through from next chute. |
| Nov. 26 | Charles Richards, | American, .. | Miner, | 30 | M. | Lansford, | Carbon, | Hand crushed while removing a pump. Outside. |
| Dec. 2 | Orice Povel, | Slavonian, .. | Laborer, | 53 | W. | Lansford, | Carbon, | Breast crushed by flying particles from a shot. |
| Dec. 11 | Mike Fell, | Greek, | Miner, | 37 | M. | Lansford, | Carbon, | Hands and face burned by explosion of gas. |
| Dec. 17 | Ben Bowman, | American, .. | Company man, | 23 | M. | Lansford, | Carbon, | |



**RAHN COLLIERY
FOSTER'S TUNNEL**

Plan showing East Mammoth
Bottom Split Gangway where
Accident occurred on Sept. 27-15
Scale 1" = 50' Lansford Pa.

Isaac M. Davies
MINE INSPECTOR



RED LINE SHOWS
COURSE OF WATER

Y
L
moth
here
ept. 27-15
Ford Pa.

348
1137.70
FIRM RAIL
DIME PAUL
JUNE 23 185

FOSTER'S TUNNEL MINE ACCIDENT

On September 27, 1915, eleven men were entombed in the East Mammoth vein bottom split gangway off Foster's Tunnel, a water level opening of the Lehigh Coal and Navigation Company, situated on the southwest boundary line of Coaldale Borough, Schuylkill County, by a sudden rush of water from the East Mammoth top split gangway, an abandoned working.

The East Mammoth top split gangway was opened off the Old Dry Hollow No. 6 slope and was driven east for a distance of 1,450 feet where it was stopped on account of the vein running into fault. The elevation of the gangway is 1,140 feet and the average dip of the vein 38 degrees, south.

The East Mammoth bottom split gangway was opened off Foster's (water level) Tunnel and has been driven east 1,350 feet where the present face is located. The elevation of the gangway is 997 feet. It was in this gangway the men were entombed, the water and debris having rushed from the East Mammoth top split gangway, 1,140 feet elevation.

It might be well to note that the East Mammoth top split gangway, off Foster's Tunnel, at an elevation of 1,007 feet, has been worked and the breasts broke through into the East Mammoth top split gangway from where the water, which closed the bottom split gangway, came. No trouble was experienced with water in any of these breasts.

In slant chute No. 24 the water broke through at eleven o'clock on the morning of September 27 after a shot had been fired by William Watkins and Gint Hollywood, two competent miners, who were engaged in driving the slant chute. Both men managed to work their way amid the water and debris down the slant chute to a crosscut into and up No. 23 chute where they were entombed for 22 hours.

The volume of water made its course from the old gangway down No. 24 slant chute, gutting it out as it went, breaking down the pillars between Nos. 24 and 20 and violently rushing out No. 20 breast, which was enlarged to practically three times its normal size. Thence it went down No. 20 chute into the gangway and then proceeded to the mouth of the tunnel. In its course the water picked up timber, rocks, coal and fine material sufficient to close compactly the gangway from No. 19 chute to No. 25 chute approximately a distance of 300 feet.

Upon being notified of the accident, General Inside Superintendent W. G. Whildin and Mine Inspector I. M. Davies immediately went into consultation and under their supervision rescue parties and plans for re-opening the gangway were promptly formed and put into operation.

Three parties were formed and definite work assigned to each, one party to open a narrow opening on the top of the gangway, another party to open the airway or monkey gangway, and a third party to follow the first party in re-opening the gangway to its full width. The party which was opening the gangway to its full width started at No. 3 chute and cleaned up such material as was carried by the water in its course towards the tunnel mouth. The party which worked the upper lift of the gangway started at chute No. 19 and opened a hole 3 by 4 feet along the south rib. This work was tedious and slow, due to the extreme difficulties which were encountered along the gang-

way. Between chutes Nos. 20 and 21 the progress was impeded by striking a steel mine car and truck. By means of an acetylene torch enough of the car was cut away to permit the men to follow the north rib and proceed with the work. At the time the men were rescued this party had advanced very close to chute No. 25 where the mules were encountered amid old timber, rock, coal and other debris. The party which advanced along the airway started at chute No. 19 proceeded thence to No. 20 where it was found that the pillars had been washed away leaving No. 20 breast almost three times its normal size. Three sets of timber well planked were used in crossing this breast and the work of advancement was continued along the airway. The pillars between Nos. 23 and 24 chutes were badly damaged and extra precaution was used in opening up this ground. When reaching No. 26 chute, black damp, CO₂, was met and it became necessary to use a supply of compressed air to drive it out in order that the work might continue. Chute No. 26 was the first chute found opened and after driving the black damp out men explored the chute to its mouth and found the gangway filled with water. Two electric pumps were used in lowering this water and when sufficiently lowered, a raft was built and explorations in the gangway began. At chute No. 27 the men were found all alive and good physical condition.

A temporary platform was built along the legs of the gangway timber and each entombed man, after being closed behind a wall of water, timber and loose coal for six days and five hours, was slid along this platform to chute No. 26, up the chute and along the course which was opened by the rescuers to chute No. 20½, then down the chute to the gangway where the company physician gave them hot coffee and, when necessary, a hypodermic injection to stimulate their weakened hearts.

To emphasize the thoroughness with which the rescue work was conducted, it may be stated that each man was carried on a stretcher from No. 20½ chute to the ambulance, at the tunnel mouth. A slip of paper showing what treatment had been given the man was placed in charge of the captain of the stretcher squad who delivered it to the physician of the Panther Valley Hospital, where the men were taken to recuperate.

Helmet men were constantly on the scene and were prepared to push ahead the work no matter what deadly gases were encountered.

The rush of water without doubt came from the East Mammoth top split gangway. Section II and III, made through Nos. 13 and 16 breasts, respectively, show a thickness of 50 and 40 feet of good rock between the top split and bottom split veins, as proved by a rock hole which was driven back from the bottom split to the top split. No connections were made, however, when drilling these holes. The required drill hole length was kept in advance of the men at all times. No water was noticed in either of these rock chutes. In view of this fact the miners who were working No. 24 slant chute were not required to have a drill hole in advance of their working face, as at this point it was assumed that a good thickness of rock separated the worked-out top split vein and the virgin bottom split vein. However, since the accident occurred and the place was examined, it has been determined that the vein ran into fault and both splits of the vein came together and the pressure of the immense body of water aided by the blast caused what little support was there to give way with the above result.

Much credit is due to Mine Inspector David J. Roderick, Hazleton, who responded promptly when asked to assist with the rescue work, also to all the employes of the company without whose noble efforts nothing could have been accomplished.

CONDITION OF COLLIERIES

LEHIGH COAL AND NAVIGATION COMPANY

Nesquehoning Colliery.—Ventilation, drainage, roads and general condition as to safety, good.

Lansford Colliery.—Ventilation, drainage and general condition as to safety, good.

Coaldale Colliery.—General condition as to ventilation, drainage, roads and safety, good.

Greenwood Colliery.—Ventilation, generally good. Roads, drainage and general condition as to safety, good.

Rahn Colliery.—General condition as to safety, good. Ventilation, roads and drainage, generally good.

Tamaqua Colliery.—Ventilation and general condition as to safety, good. Drainage fair.

COXE BROTHERS AND COMPANY, INCORPORATED

Beaver Meadow Colliery.—Ventilation, generally good. Drainage and roads, good. General condition as to safety, good.

ESTATE A. S. VAN WICKLE

Coleraine Colliery.—Ventilation, drainage, roads and general condition as to safety, good.

The Wheelbarrow Wharton slope was abandoned on January 22. The No. 2 Old Wharton and No. 3 Mammoth slopes were also abandoned in the early part of the year.

EVANS COLLIERY COMPANY

Evans Colliery.—Ventilation, generally good. Drainage, roads and general condition as to safety, good.

ELMER NEYER

Black Rock Colliery.—The general conditions were good during operation. The slope was worked out and abandoned July 26.

IMPROVEMENTS

LEHIGH COAL AND NAVIGATION COMPANY

Nesquehoning Colliery.—Extended sub-station ash disposal plant. Installed additional breaker wash-water pump; also 5 additional jigs for steam coal. Built new sub-station near Old Hackleburnie tunnel.

Lansford Colliery.—Two electric centrifugal pumps, 3,000 gallons capacity, were installed in No. 4 slope and one centrifugal pump, 1,500 gallons capacity, was installed at No. 6 plane.

The hoisting engine, 28 by 48 inches, at No. 4 tender shaft, and the electric air compressor at Lansford No. 5 have been completed.

A new 150,000 CFM electrically driven fan and substation have been erected at the Old Black Rock slope.

A double track plane between 4th and 5th levels, No. 4 slope, has been completed.

Constructed miner's electric lamp charging station for No. 4 slope and No. 5 shaft.

A steel bridge and shelter house erected at top of No. 4 shaft.

Installed portable horizontal triplex electric slush pump.

Completed electric air compressor, No. 5, substation, completed also fireproof boiler house and washhouse for firemen at No. 6.

Made airway and escapeway, Bottom Split Mammoth, 4th level, No. 4 slope, to 2nd level, No. 5 shaft.

Coaldale Colliery.—Installed Goyne pump at No. 9 boiler house, to pump water and slush to Summit Hill mine fire; also 25,000 gallon steel water tank, No. 9 boiler house, and jig engines complete.

Extended Safety lamp house, No. 9 shaft, for miner's electric lamp charging station.

Laid ten-inch culm line from breaker to Summit Hill fire.

A new landing with transfer truck has been installed on 3rd. level No. 8 Old Shaft.

Greenwood Colliery.—Completed sinking of new shaft, depth 786 feet.

Installed transfer truck at top of Old Shaft.

Remodeled breaker and installed rotary dump and circular platform picking table.

Installed 200,000 CFM steam-driven fan in connection with water shaft as outlet.

Doubled the capacity of wash-water reservoir.

Rahn Colliery.—Completed transfer truck, pit, etc., at top of new shaft. Constructed shelter house and bridge at top of new shaft.

One triplex and two centrifugal pumps, electrically-driven, were installed on second level.

Built safety lamp house and charging station, equipped with 500 miner's electric lamps and necessary charging apparatus. Installed 200,000 CFM electrically-driven fan.

New steam-heating plan for hoist-house and buildings near top of new shaft; also new fireproof powder house.

New fireproof wash-house at Foster's tunnel.

Tamaqua Colliery.—Sinking of new shaft about one-half completed. New sub-station and equipment, also 400 H. P. electric hoist and building for water shaft, are under construction.

ESTATE A. S. VAN WICKLE

Coleraine Colliery.—Slope No. 2 New Wharton. Built an addition of stone and cement to the stable to accommodate 5 more mules.

A pump-house was made 12 by 36 feet in rock, on side of slope, at a point 547 feet from the surface and an emergency pump size 30 by 12 by 12 inches was installed therein.

Drove a 7 by 10 foot tunnel 120 feet long, from the above slope south, at a point 100 feet from the surface, to connect with a split of the Mammoth vein.

Made a pump-house of stone and cement at the foot of the slope, size 30 by 12 by 12 feet, and installed therein a Jeanesville 18 by 8 by 18 inch pump.

Buck Mountain Slope.—Put in concrete walls on top of the main air shaft, replacing the old timber.

Slope No. 1 Wharton.—A shaft used to carry the exhaust steam from the pumps to the surface was walled up with stone and cement a distance of 25 feet from the vein to the surface.

Slope Wheelbarrow Gamma.—Drove a tunnel 7 by 10 feet by 155 feet long, to connect with the Buck Mountain vein.

Slope No. 7 Buck Mountain.—The slope was sunk from the lower level, down to the south boundary line, distance 135 feet, pitch 23 degrees.

The No. 2 Basin. Built a flume 5 feet 6 inches by 8 feet by 600 feet long. Constructed a building of cement and wood, containing a wash-house 16 by 40 feet and a hospital 10 by 16 feet.

COXE BROTHERS AND COMPANY, INCORPORATED

Beaver Meadow Colliery.—The south end of the main drainage tunnel was retimbered for a distance of 1,000 feet from the entrance.

The mouth of No. 2 slope was repaired by replacing the wood timber with steel "I" beams resting on concrete walls; the space between the "I" beams being filled in with concrete, reinforced with by-rib. Twenty-six steel "I" beams were also placed along the slope to support the roof, replacing wood support.

A brick building 8 by 10 feet, was erected to house the fire-pump.

The hoisting engine at No. 2 slope was replaced by a larger and more modern engine, 24 by 38 inches. The old engine house was replaced by one made of tile. A tile air compressor house was erected.

The breaker was equipped throughout with a modern spray system for protection against fire.

During the year 190,142 cubic yards of material were excavated from the Greenfield stripping, and 202,281 cubic yards from the Temperance stripping.



EIGHTEENTH DISTRICT

SCHUYLKILL COUNTY

Pottsville, Pa., February 18, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Eighteenth Anthracite District for the year ending December 31, 1915.

Respectfully submitted,

KERAN DONAHUE,

Inspector.

SUMMARY OF STATISTICS

| | |
|--|-----------|
| Number of collieries, | 13 |
| Number of mines, | 46 |
| Number of mines in operation, | 46 |
| Number of tons of coal shipped to market, | 2,781,872 |
| Number of tons used at mines for steam and heat, | 344,443 |
| Number of tons sold to local trade and used by employes, | 34,125 |
| Number of tons produced, | 3,160,440 |
| Number of tons produced by compressed air machines, .. | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 4,413 |
| Number of persons employed outside, | 1,939 |
| Number of fatal accidents inside of mines, | 21 |
| Number of fatal accidents outside, | 4 |
| Number of non-fatal accidents inside of mines, | 38 |
| Number of non-fatal accidents outside, | 14 |
| Number of tons of coal produced per fatal accident inside, .. | 150,497 |
| Number of tons produced per fatal accident outside, ... | 790,110 |
| Number of tons produced per fatal accident inside and outside, | 126,418 |
| Number of persons employed per fatal accident inside, .. | 210 |
| Number of persons employed per fatal accident outside, . | 485 |
| Number of persons employed per fatal accident inside and outside, | 254 |
| Number of persons employed per non-fatal accident in- side, | 116 |
| Number of persons employed per non-fatal accident out- side, | 138 |
| Number of persons employed per non-fatal accident inside and outside, | 122 |
| Number of wives made widows, | 17 |
| Number of children made orphans, | 45 |
| Number of steam locomotives used inside of mines, | 2 |
| Number of steam locomotives used outside, | 28 |
| Number of compressed air locomotives used inside, .... | .... |
| Number of compressed air locomotives used outside, | 9 |
| Number of electric motors used inside, | 10 |
| Number of electric motors used outside, | 1 |
| Number of gasoline locomotives used inside, | 2 |
| Number of fans in use, | 32 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 21 |
| Number of non-gaseous mines in operation, | 25 |
| Number of new mines opened, ..... | ..... |
| Number of old mines abandoned, ..... | ..... |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|---|-----------|
| Lehigh and Wilkes-Barre Coal Company, | 706,225 |
| Philadelphia and Reading Coal and Iron Company, | 706,063 |
| Dodson Coal Company, | 440,978 |
| Maryd Coal Company, | 370,233 |
| Coxe Brothers and Company, Incorporated, | 333,334 |
| Lehigh Valley Coal Company, | 296,365 |
| Mill Creek Coal Company, | 170,510 |
| East Lehigh Coal Company, | 72,506 |
| Port Carbon Coal Company, | 47,688 |
| Gorman and Campion, | 16,538 |
| Total, | 3,160,440 |

Production by Counties

| | |
|-------------------|-----------|
| Schuylkill, | 3,160,440 |
|-------------------|-----------|

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|---|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| Lehigh and Wilkes-Barre Coal Co., | 4 | 1 | 5 | 13 | 10 | 23 | 176,556 | 54,225 | 1,138 | 543 | 1,681 | 285 | 543 | 87 | 54 |
| Philadelphia and Reading Coal and Iron Co., | 4 | ..... | 4 | 16 | ..... | 16 | 176,556 | 44,120 | 1,026 | 468 | 1,494 | 257 | ..... | 64 | ..... |
| Dodson Coal Co., | 3 | ..... | 3 | 1 | ..... | 1 | 146,983 | 440,978 | 522 | 219 | 741 | 174 | ..... | 522 | ..... |
| Maryd Coal Co., | 1 | ..... | 1 | 1 | ..... | 1 | 370,233 | 370,233 | 975 | 178 | 553 | 375 | ..... | 375 | 178 |
| Coxe Brothers and Co., Inc., | 2 | ..... | 2 | 4 | 1 | 5 | 166,667 | ..... | 445 | 114 | 559 | 222 | ..... | ..... | 114 |
| Delaware River Coal Co., | 1 | ..... | 1 | ..... | ..... | ..... | 74,091 | ..... | 563 | 147 | 710 | 141 | ..... | 141 | ..... |
| Mill Creek Coal Co., | 4 | 1 | 5 | 4 | ..... | 4 | 170,510 | 56,837 | 189 | 155 | 335 | 189 | ..... | 60 | 77 |
| East Lehigh Coal Co., | 1 | 2 | 3 | 3 | ..... | 3 | 36,253 | ..... | 97 | 61 | 158 | 48 | ..... | ..... | ..... |
| Miscellaneous Companies, | 2 | ..... | 2 | ..... | ..... | ..... | ..... | ..... | 67 | 54 | 121 | ..... | ..... | ..... | ..... |
| Totals and averages, | 21 | 4 | 25 | 38 | 14 | 52 | 150,497 | 83,169 | 4,413 | 1,939 | 6,352 | 210 | 485 | 116 | 138 |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Percentages | |
|--|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|-------------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | Totals |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | | | | | | | 1 | 1 | 1 | ..... | 1 | ..... | 4 | 19.05 |
| Falls of slate, | | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4.76 |
| Falls of roof, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 2 | 19.05 |
| Mine cars, | | | 1 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 2 | 9.53 |
| Explosions of gas, | | | | | | | 2 | ..... | ..... | ..... | ..... | ..... | ..... | 9.53 |
| Suffocation by gas, etc., | | | | | | | | | | | | 1 | 1 | 4.76 |
| Blasts, premature and otherwise, | | | | | | | | | | 2 | ..... | ..... | 2 | 9.52 |
| Falling down chute, | | | | 1 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 2 | 9.52 |
| Crushed at batteries, | | | | | | | | 1 | 1 | ..... | ..... | ..... | 2 | 4.76 |
| Rush of coal, | | | | 1 | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 2 | 9.52 |
| Totals, | 1 | 1 | 1 | 2 | ..... | ..... | 3 | 2 | 3 | 4 | 3 | 1 | 21 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Machinery, | | | | | | | 1 | ..... | ..... | ..... | ..... | ..... | 1 | 25.00 |
| Boiler explosions, | | | | | | | | | | | 2 | ..... | 2 | 50.00 |
| Falling in breaker, .. | | | | | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 25.00 |
| Totals, | | | | | 1 | ..... | 1 | ..... | ..... | ..... | 2 | ..... | 4 | 100.00 |
| Grand totals inside and outside, | 1 | 1 | 1 | 2 | 1 | ..... | 4 | 2 | 3 | 4 | 5 | 1 | 25 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | | | | 1 | | 2 | | | | | | 1 | 4 | 10.53 |
| Falls of slate, | | | | | | | 1 | | | 1 | | 1 | 3 | 5.27 |
| Falls of roof, | | 1 | | | | | | | | | | | 1 | 5.27 |
| Mine cars, | 1 | | 1 | 1 | | 3 | 1 | 2 | 1 | 3 | | | 9 | 21.95 |
| Explosions of gas, | | 1 | | | | | | | | | | | | 23.69 |
| Explosions of powder and dynamite, | | 1 | | | | | | | | | | | 1 | 2.63 |
| Blasts, premature and otherwise, | | | 1 | | | | | | | 2 | | | 2 | 5.26 |
| Mules, | | | | | | | | | | | 1 | 1 | 2 | 5.26 |
| Explosion of carbide, | | | | | | | | | 2 | | | | | 5.26 |
| Struck by timber, | | | | | | | | | | 1 | | | 1 | 2.63 |
| Struck by piece of coal, | | | | | | | | | | | | 1 | 1 | 2.63 |
| Rush of gob, | | | | | | 1 | | | | | | 1 | 2 | 5.26 |
| Rush of coal, | | | | | | | 1 | | | | | | 1 | 2.63 |
| Squeezed by timber, | | | | | | | 1 | | | | | | 1 | 2.63 |
| Falling, | | | | | | | | | | | 1 | | 1 | 2.63 |
| Totals, | 1 | 3 | 1 | 2 | | 6 | 4 | 2 | 3 | 9 | 2 | 5 | 38 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | | 2 | | | | | | | | | 1 | 1 | 4 | 28.58 |
| Scalded by water from hot ashes, | | | | | | | | | | | 1 | | 1 | 7.14 |
| Squeezed between barrels, | | | | | | | | | 1 | | | | 1 | 7.14 |
| Falling off ladder, | | | | | | | | | | | 1 | | 1 | 7.15 |
| Falling down steps, | | | | | | | | | | | | 1 | 1 | 7.14 |
| Struck by piece of coal, | | | | | | | | | | 1 | | | 1 | 7.14 |
| Struck by timber, | | | | | | | | | 1 | | 1 | | 2 | 14.29 |
| Struck by piece of rock, | | | | | | | | | 1 | | | | 1 | 7.14 |
| Struck by stone, | | | | | | 1 | | | | | | | 1 | 7.14 |
| Struck by block, | | 1 | | | | | | | | | | | 1 | 7.14 |
| Totals, | | 3 | | | | 1 | | | 3 | 1 | 4 | 2 | 14 | 100.00 |
| Grand totals inside and outside, | 1 | 6 | 1 | 2 | | 7 | 4 | 2 | 6 | 10 | 6 | 7 | 52 | ..... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|--|--------|----------|----------|---------|-----------|--------|------|------|-----|-------|-------|----------|
| | Totals | December | November | October | September | August | July | June | May | April | March | February |
| Inside | | | | | | | | | | | | |
| Miners, | 16 | 1 | 3 | 3 | 2 | 1 | 3 | ... | ... | 2 | ... | 1 |
| Miners' laborers, | 3 | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | 1 |
| Drivers and runners, | 2 | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | ... |
| Totals, | 21 | 1 | 3 | 4 | 3 | 2 | 3 | ... | ... | 2 | 1 | 1 |
| Outside | | | | | | | | | | | | |
| Engineers and firemen, | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Drivers, | 2 | ... | 1 | ... | ... | ... | 1 | ... | 1 | ... | ... | ... |
| Jig runners, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Totals, | 4 | ... | 2 | ... | ... | ... | 1 | ... | 1 | ... | ... | ... |
| Grand totals inside and outside, | 25 | 1 | 5 | 4 | 3 | 2 | 4 | ... | 1 | 2 | 1 | 1 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|--|--------|----------|----------|---------|-----------|--------|------|------|-----|-------|-------|----------|
| | Totals | December | November | October | September | August | July | June | May | April | March | February |
| Inside | | | | | | | | | | | | |
| Miners, | 18 | 3 | ... | 4 | 2 | 2 | 1 | 4 | ... | 1 | ... | 2 |
| Miners' laborers, | 8 | 1 | ... | 1 | 2 | ... | 2 | 2 | ... | ... | ... | ... |
| Drivers and runners, | 9 | 1 | 1 | 4 | 1 | ... | 1 | ... | ... | ... | 1 | ... |
| Chainmen, | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... |
| Track-helpers, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Patchers, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Totals, | 38 | 5 | 2 | 9 | 3 | 2 | 4 | 6 | ... | 2 | 1 | 3 |
| Outside | | | | | | | | | | | | |
| Firemen, | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Company men, | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Loaders, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Painters, | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Oilers, | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Timbermen, | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... |
| Chute bosses, | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Ashmen, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Propmen, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... |
| Laborers, | 5 | ... | ... | 1 | 2 | ... | ... | 1 | ... | ... | 1 | ... |
| Totals, | 14 | 2 | 4 | 1 | 3 | ... | ... | 1 | ... | ... | 3 | ... |
| Grand totals inside and outside, | 52 | 7 | 6 | 10 | 6 | 2 | 4 | 7 | ... | 2 | 1 | 6 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| American, | ... | ... | ... | ... | 1 | ... | 2 | ... | ... | ... | 1 | 4 |
| English, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| German, | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | 2 |
| Polish, | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | 3 |
| Hungarian, | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| Italian, | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 2 |
| Slavonian, | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | ... | 3 |
| Lithuanian, | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | 1 | 3 |
| Russian, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 2 |
| Greek, | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | 2 |
| Totals, | 1 | 1 | 1 | 2 | 1 | ... | 4 | 2 | 3 | 4 | 5 | 25 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| American, | ... | 2 | ... | 1 | ... | ... | 1 | ... | 1 | 2 | ... | 10 |
| Polish, | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 3 |
| Italian, | ... | 1 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 3 |
| Slavonian, | ... | ... | ... | ... | ... | 1 | 2 | ... | ... | ... | 1 | 5 |
| Lithuanian, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Austrian, | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 3 |
| Russian, | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | 3 |
| Greek, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 |
| Totals, | 1 | 6 | 1 | 2 | ... | 7 | 4 | 2 | 6 | 10 | 6 | 52 |

| | | | | | | | | | | | | | | | | | |
|-----------------------------|--------------------|-------------|-------|-------|-------|-------|-------|---|---|--------------|---------------|---------|--------|---------|--------|-----|------|
| Eagle Hill Colliery: | Shaft, | Fan, | 18 | 6.1 | 6 | 70 | 1.5 | { | { | Steam, | Guibal, ... | 61,450 | 57,075 | 63,975 | 136 | | |
| | Slope, | Gaseous, .. | 21 | 6 | 6.1 | 68 | 1 | | | | | 17,000 | 15,900 | 18,000 | 23 | | |
| | Drift, | Gaseous, .. | 8 | 2.1 | 2.3 | 80 | .8 | | | | | 19,200 | 16,100 | 19,200 | 46 | | |
| | Drift, | Non-gas, .. | 8 | 2.1 | 2.3 | 80 | .6 | | | | | 18,500 | 15,000 | 18,800 | 22 | | |
| | Drift, | Gaseous, .. | 8 | 2.1 | 2.3 | 80 | .6 | | | | | 8,500 | 8,000 | 9,000 | 9 | | |
| Dodson Coal Co. | | | | | | | | | | | | | | | | | |
| Morea Colliery: | Slope, | Fan, | 18 | 6.10 | 6 | 80 | 1 | { | { | Steam, | Guibal, ... | 43,000 | 41,000 | 75,000 | 522 | | |
| | Shaft, | Gaseous, .. | 18 | 6.10 | 6 | 80 | .9 | | | | | | | | | | |
| Maryd Coal Co. | | | | | | | | | | | | | | | | | |
| Maryd Colliery: | Shaft, | Fan, | 20 | 6 | 6 | 80 | 2 | { | { | Steam, | Guibal, .. | 80,000 | 75,000 | 80,000 | 206 | | |
| | Shaft, | Gaseous, .. | 18 | 6 | 5 | 70 | 1.75 | | | | | 42,200 | 42,000 | 42,240 | 49 | | |
| | Shaft, | Gaseous, .. | 16 | 4.2 | 4.9 | 65 | 1.75 | | | | | 22,000 | 18,000 | 22,000 | 40 | | |
| | Shaft, | Gaseous, .. | 16 | 4 | 5 | 80 | 1.80 | | | | | 30,000 | 25,000 | 30,000 | 80 | | |
| | Shaft, | Gaseous, .. | 16 | 4 | 5 | 80 | 1.80 | | | | | | | | | | |
| Coxe Brothers and Co., Inc. | | | | | | | | | | | | | | | | | |
| Onaida Colliery: | { Shaft, | { | { | { | { | { | { | { | { | { | { | { | { | { | { | | |
| | and | | | | | | | | | | | | | | | | |
| | Slope | | | | | | | | | | | | | | | | |
| | Shaft, | | | | | | | | | | | | | | | | |
| Onaida No. 1, | Slope, | Fan, | 12.6 | 5.3 | 5.10 | 125 | .7 | { | { | Steam, | Pelzer, | 69,900 | 55,000 | 72,000 | 192 | | |
| | Slope, | Fan, | 20 | 6 | 6.6 | 70 | 4.2 | | | | | 55,800 | 48,200 | 61,900 | 135 | | |
| | Slope, | Non-gas, .. | 20 | 6 | 6.3 | 60 | 5 | | | | | 42,000 | 32,700 | 43,800 | 118 | | |
| | Slope, | Gaseous, .. | 20 | 6 | 6.3 | 65 | 1.6 | | | | | | | | | | |
| Lehigh Valley Coal Co. | Slope, | Fan, | 20 | 6.8 | 6 | 70 | 1 | { | { | Steam, | Guibal, ... | 116,000 | 77,000 | 116,000 | 260 | | |
| | Slope, | Fan, | 25 | 8 | 6.3 | 65 | 1.6 | | | | | 13 | 97,000 | 45,000 | 97,000 | 292 | |
| | Slope, | Gaseous, .. | 20 | 6.8 | 6 | 70 | 1 | | | | | | | | | | |
| | Slope, | Fan, | 25 | 8 | 6.3 | 65 | 1.6 | | | | | | | | | | |
| Mill Creek Coal Co. | | | | | | | | | | | | | | | | | |
| Middle Lehigh Colliery: | Slope, | Fan, | 16 | 4.5 | 4.1 | 80 | .4 | { | { | Steam, | Guibal, ... | 70,400 | 51,200 | 88,000 | { 87 | | |
| | Slope, | Fan, | 16 | 4.5 | 4.1 | 80 | .4 | | | | | | | | | | { 25 |
| | Slope, | Non-gas, .. | 16 | 4.5 | 4.1 | 80 | .4 | | | | | | | | | | { 6 |
| | Slope, | Non-gas, .. | 16 | 4.5 | 4.1 | 80 | .4 | | | | | | | | | | |
| Wolf Creek Colliery: | Drift, | Natural | ..... | ..... | ..... | ..... | ..... | { | { | Steam, | Guibal, ... | 5,100 | 5,130 | 5,530 | 22 | | |
| | North, | Non-gas, .. | ..... | ..... | ..... | ..... | 1 | | | | | 7,150 | 7,150 | 7,650 | 15 | | |
| | Tunnel, | Non-gas, .. | ..... | ..... | ..... | ..... | 2 | | | | | 16,200 | 16,300 | 17,500 | 27 | | |
| | Slope, | Natural | | | | | | | | | | | | | | | |
| East Lehigh Coal Co. | Slope, | Fans, ... { | 14 | 3.3 | 3 | 100 | .7 | { | { | Steam, | Guibal, ... | 20,000 | 19,000 | 22,000 | 85 | | |
| | East Lehigh, | Fans, ... { | 10 | 3.3 | 3 | 98 | .7 | | | | | | | | | | |
| Port Carbon Coal Co. | | | | | | | | | | | | | | | | | |
| Lucy R. Colliery: | Drift, | Natural, .. | ..... | ..... | ..... | ..... | ..... | { | { | Steam, | Guibal, ... | ..... | ..... | ..... | 40 | | |
| | Drift, | Natural, .. | | | | | | | | | | | | | | | |

TABLE I.—Continued

| | |
|--|--|
| Number of persons employed inside | } 27 } |
| Number of cubic feet of air per minute passing out at outlet | 17,000 |
| Total number of cubic feet of air per minute circulating in all the splits | 15,800 |
| Number of cubic feet of air per minute entering the mine at inlet | 16,500 |
| Number of splits of air currents | 1 |
| Power used | Steam, |
| Name of fan | Gubbal, |
| Water gauge developed—in inches | 1 |
| Number of revolutions per minute | 140 |
| Depth of blades in feet and inches | 1.8 |
| Width of blades in feet and inches | 4 |
| Diameter of fan in feet and inches | 10 |
| Method of ventilation | Natural, } Fan, } |
| Gaseous or non-gaseous | Non-gas., } Non-gas., } |
| Kind of opening | Drift, Slope, |
| Names of Operators and Mines | Gorman and Campion Bell Colliery: Bell, Bell, |

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|--|--|---|---|--|---|--|
| Lehigh and Wilkes-Barre Coal Co. Andenried No. 4. Honey Brook No. 5. Philadelphia and Reading Coal and Iron Co. Silver Creek. Eagle Hill. | $\left. \begin{array}{l} \text{Schuylkill,} \\ \text{Lehigh,} \end{array} \right\}$ $\left. \begin{array}{l} \text{Schuylkill,} \\ \text{Lehigh,} \end{array} \right\}$ | C. F. Huber. G. B. Hadesty. | Wilkes-Barre. Pottsville. | Walter Fahringer. { Claude F. Lewis, Division Supt. David Jones, In- side Supt. William Tiley, Outside Supt. } | Andenried. Pottsville. | C. R. R. of N. J. P. and R. |
| Dodson Coal Co. Morea. Maryd Coal Co. Coxe Brothers and Co., Inc. Onida. Lehigh Valley Coal Co. Buck Mountain. | Schuylkill. Schuylkill. Schuylkill. Schuylkill. Schuylkill. | J. B. Connell. T. E. Snyder. Thomas Thomas. Thomas Thomas. T. D. Jones. | Beaver Brook. Hazleton. Wilkes-Barre. Wilkes-Barre. New Boston. | William A. McGinley. Arthur Kennedy. W. H. Davies. Thomas R. Jones. J. E. Jones. | Morea. Maryd. Hazleton. Mahanoy City. New Boston. | L. V., Penna. and P. and R. P. and R. and C. R. R. of N. J. Lehigh Valley Lehigh Valley { Penna. and L. V. Pennsylvania |
| Mihl Creek Coal Co. Middle Lehigh. Wolf Creek. East Lehigh. East Lehigh Coal Co. Port Carbon Coal Co. Lucy R. Gorman and Cumption Bell. | $\left. \begin{array}{l} \text{Schuylkill,} \\ \text{Lehigh,} \end{array} \right\}$ Schuylkill. Schuylkill. Schuylkill. | E. M. B. Shepp. Daniel J. Slattery. Daniel J. Slattery. | Tamaqua. Port Carbon. Tuscarora. | E. M. B. Shepp. Daniel J. Slattery. Daniel J. Slattery. | Tamaqua. Port Carbon. Tuscarora. | L. and N. E. and P. and R. P. and R. P. and R. |

TABLE 3.—Number of each class of employees inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | Outside | | | | | | | | | | Grand total | |
|---|-------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|---------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|---------------------|---------------|-------------|-----|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employees | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | Bookkeepers and clerks | All other employees | Total outside | | |
| Leligh and Wilkes-Barre Coal Co., | Schuylkill, | 3 | 8 | 4 | 357 | 239 | 72 | 39 | 13 | 258 | 154 | 1,138 | 3 | 7 | 31 | 65 | 82 | 1 | 5 | 348 | 543 | 1,681 | |
| Philadelphia and Reading Coal and Iron Co., | | 3 | 22 | 6 | 477 | 150 | 69 | 1 | 1 | 61 | 242 | 1,026 | ... | 3 | 25 | 47 | 65 | 11 | 11 | 306 | 468 | 1,494 | |
| Dodson Coal Co., | | 1 | 1 | 1 | 150 | 125 | 33 | 3 | 2 | 89 | 77 | 522 | 1 | 1 | 11 | 37 | 16 | 21 | 5 | 117 | 219 | 741 | |
| Maryd Coal Co., | | 1 | 1 | 10 | 360 | 20 | 29 | 7 | 1 | 24 | 16 | 375 | 1 | 2 | 14 | 28 | 27 | ... | ... | 3 | 103 | 178 | 553 |
| Coxe Brothers and Co., Inc., | | 17 | 8 | ... | 318 | 129 | 29 | 9 | 1 | 13 | 56 | 562 | ... | 1 | 17 | 22 | ... | ... | 4 | 80 | 114 | 559 | |
| Leligh Valley Coal Co., | | 2 | 3 | ... | 98 | 35 | 15 | 1 | 5 | 11 | 6 | 180 | ... | 2 | 1 | 21 | ... | ... | 9 | 95 | 147 | 710 | |
| Mill Creek Coal Co., | | 2 | ... | 1 | 38 | 16 | 17 | 2 | 2 | 16 | 4 | 97 | 1 | 1 | 1 | 29 | ... | 7 | 5 | 93 | 155 | 335 | |
| East Leligh Coal Co., | | 1 | ... | ... | 20 | 6 | 4 | ... | ... | 4 | 3 | 40 | ... | 1 | 3 | 4 | 10 | ... | ... | 42 | 61 | 158 | |
| Fort Carbon Coal Co., | | 1 | 1 | ... | 16 | 4 | 2 | 1 | ... | 2 | ... | 27 | ... | 1 | 2 | 4 | 4 | ... | ... | 12 | 30 | 70 | |
| Gorman and Crompton, | | 1 | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 24 | 51 | |
| Totals, | | 16 | 60 | 22 | 1,982 | 800 | 307 | 68 | 32 | 520 | 606 | 4,413 | 8 | 20 | 131 | 562 | 217 | 49 | 39 | 1,213 | 1,939 | 6,352 | |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|------------------------|-------------------|-----------------|-----|-------------------|------------------|-------------------|--------------------|-----------|--|
| Jan. 23 | Joseph Salvoglie, | Italian, | Laborer, | 40 | M. | 1 | 4 | Honey No. 5, Brook | | Killed by fall of roof on gangway while assisting to place a truck on the track. |
| Feb. 25 | John Grudgen, | Polish, | Miner, | 30 | M. | 1 | 2 | Middle Leligh, .. | | Killed by fall of slate at face of breast. |
| March 4 | John Strupinas, | Lithuanian, | Driver, | 35 | S. | ... | ... | Silver Creek, ... | | Killed by falling under empty trip of car. |
| April 21 | Ralph Cortez, | Italian, | Miner, | 38 | M. | 1 | 6 | Honey No. 5, Brook | | Killed by rush of coal on gangway while opening chute in pillar. |
| | Fred Sheldigger, | German, .. | Miner, | 62 | M. | 1 | ... | East Leligh, ... | | Killed by falling down chute while making an examination in the morning. |
| May 11 | Richard Green, | American, ... | Jig runner, ... | 23 | S. | ... | ... | Buck Mountain, ... | | Killed by falling a distance of 33 feet to the concrete floor in the breaker. Outside. |
| July 8 | John Kotch, | Polish, | Miner, | 38 | M. | 1 | 6 | Buck Mountain | | Fatally burned by explosion of gas at face of breast. |
| 12 | Robert Cowley, | American, ... | Miner, | 37 | M. | 1 | 7 | ... | | Killed by fall of coal at face of breast. |
| 22 | Stephen Guba, | Slavonian, ... | Miner, | 34 | M. | 1 | ... | Onida, | | Fatally injured. While playing his foot |
| | John Batoma, | American, ... | Jig runner, ... | 17 | S. | ... | ... | Honey No. 5, Brook | | in the pillar. Outside. |
| Aug. 18 | Michael Baris, | Slavonian, ... | Laborer, | 55 | M. | 1 | 3 | Onida, | | Killed by fall of coal at face of breast. |
| 25 | Michael Suremas, | Greek, | Miner, | 48 | M. | 1 | 3 | Morea, | Schuykill | Killed by rush of coal on gangway while sinking a prop hole. |
| Sept. 4 | Frank Rhuberg, | German, | Miner, | 55 | M. | 1 | ... | East Leligh, ... | | Crushed at battery by rush of coal. |
| 17 | John Bely, | Hungarian, ... | Miner, | 48 | S. | ... | ... | Maryd, | | Killed by fall of coal at pillar work. |
| 23 | John Frank, | Slavonian, ... | Driver, | 22 | S. | ... | ... | Silver Creek, ... | | Killed by falling under cars on gangway. |
| Oct. 12 | Alex Tomcavage, | Russian, ... | Miner, | 35 | M. | 1 | 2 | Audleind No. 4 | | Fatally injured by fall of roof in cross-cut. Died in hospital the same day. |
| 19 | Frank Younisky, | Greek, | Miner, | 25 | S. | ... | ... | Morea, | | Fatally injured by falling down chute. He was up in the chute while his partner was preparing a charge when the pillar fell, causing a heavy blow down the chute. Died that night at the hospital. |
| Nov. 22 | Frank Spokes, | Lithuanian, ... | Miner, | 22 | M. | 1 | 2 | Silver Creek, ... | | Fatally injured by explosion of blast while re-charging a hole that had missed fire. |
| 20 | Mike Condrack, | Polish, | Laborer, | 28 | S. | ... | ... | Buck Mountain | | Killed by fall of roof at face of gangway. |
| | John Birbeck, | English, ... | Miner, | 33 | M. | 1 | 2 | ... | | |
| | Frank Metzger, | American, ... | Miner, | 23 | M. | 1 | 4 | ... | | |

TABLE 4. — Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|------------------------|---------------|----------------|-----|-------------------|------------------|-------------------|---|-----------------|---|
| Nov. 20 | Steve Butrawevitch, .. | Russian, .. | Miner, | 32 | M. | 1 | 1 | Audenried No. 4 Middle Lehigh. Morca, | Schuylkill, ... | Killed by fall of coal while robbing pillars. Instantly killed by boiler explosion. Out-side. Smothered. He started to put a hole in a rock that was caught in the battery, when the rock dropped out and caught him forcing his face down into some soft dirt. |
| Nov. 23 | Adam Morasko, .. | Polish, | Engineer, | 32 | M. | 1 | 2 | | | |
| Dec. 11 | John Rabbits, | Polish, | Driver, | 22 | M. | 1 | 1 | | | |
| | John Dhua, | Lithuanian, | Miner, | 22 | S. | ... | ... | | | |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|---------------------------|----------------|------------------|-----|-------------------|-----------------------|---------------|--|
| Jan. 5 | Wasil Wido, | Polish, | Patcher, | 17 | S. | Andenried No. 4, | Schuylkill... | Slight concussion of brain and laceration of scalp. Caught by cars on gangway. |
| Feb. 11 | George Anspach, | American, .. | Laborer, | 45 | M. | Middle Lehigh, | | Hand cut while blocking a pump. The block slipped and caught him. Outside. |
| | Stephen Canda, | Polish, | Driver, | 18 | S. | Middle Lehigh, | | Arm fractured by being caught by cars on gangway. |
| 12 | John Nick, | Italian, | Miner, | 44 | M. | Middle Lehigh, | | Head cut and eye injured by explosion of dynamite at face of tunnel. |
| 16 | Valentine Tomashefski, .. | Polish, | Miner, | 41 | M. | Silver Creek, | | Face and hands burned by explosion of gas at face of breast. |
| 18 | John Sanyo, | American, .. | Propman, .. | 23 | S. | Oneida, | | Leg bruised by being caught by cars. Outside. |
| 24 | George Poligia, | Polish, | Aslman, | 47 | M. | Maryd, | | Pelvis fractured. Caught between the door of boiler house and a dumper. Outside. |
| March 8 | George Skela, | Polish, | Miner, | 45 | M. | Andenried No. 4, | | Leg fractured while assisting to lift a car. |
| April 12 | John De Salvatore, | Italian, | Miner, | 27 | M. | Eagle Hill, | | Jaw and cheek bone fractured by fall of coal on gangway. |
| 22 | Holden Berger, | American, .. | Track-helper, .. | 20 | S. | Buck Mountain, | | Squeezed between engine and timber on gangway. |
| June 4 | Michael Rehill, | Austrian, .. | Laborer, | 37 | S. | Honey Brook No. 5, .. | | Fractured by rush of cob in breast. |
| 10 | Joseph Rehill, | Lithuanian, .. | Miner, | 32 | S. | Silver Creek, | | Hands and face burned by explosion of gas at face of breast. |
| 16 | John Bushnack, | Austrian, .. | Miner, | 38 | M. | Honey Brook No. 5, .. | | Hip dislocated by fall of coal near face of breast. |
| 18 | Danko Lacotch, | Slavonian, .. | Laborer, | 56 | M. | Honey Brook No. 5, .. | | Struck on top of head by a stone that rolled off of slanting. Outside. |
| 22 | Lawrence Lagutko, .. | Polish, | Miner, | 31 | M. | Eagle Hill, | | Face and hands burned by explosion of gas at face of breast. |
| 25 | Joe Mitchell, | Polish, | Laborer, | 19 | S. | Andenried No. 4, | | Head, leg and arm lacerated by fall of coal at face of breast. |
| July 8 | Francis Kiem, | American, .. | Laborer, | 22 | S. | Buck Mountain, | | Face and hands burned by explosion of gas at face of breast. |
| 9 | Frank Drozi, | Austrian, .. | Miner, | 28 | M. | Honey Brook No. 5, .. | | Hand and leg injured by rush of coal in slant chute. |

TABLE 5 —Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|------------------------|----------------|------------------|-----|-------------------|-------------------------|----------------|--|
| July 14 | Andrew Herites, | Slavonian, .. | Driver, | 20 | S. | Maryd, | | Arm fractured. Caught between timber on car and top of gangway. |
| | John Darchalk, | Slavonian, .. | Laborer, | 40 | M. | Audenried No. 4, | | Shin fractured by fall of roof at face of shaft. |
| Aug. 2 | Joseph Leato, | Italian, | Miner, | 39 | M. | { Eagle Hill, | | Hands and face burned by explosion of gas at face of breast. |
| Sept. 7 | Joseph Galasky, | Greek, | Laborer, | 25 | M. | { Eagle Hill, | | Face and neck burned by explosion of carbide. |
| 10 | John Fazick, | Greek, | Laborer, | 28 | S. | { Eagle Hill, | | Arm fractured by being struck by a piece of rock while unloading car. Outside. |
| | Gipp Michael, | Polish, | Laborer, | 32 | M. | Audenried No. 4, | | Toes crushed by timber rolling on him. Outside. |
| 23 | Berthner Steve, | Polish, | Timberman, | 50 | M. | Audenried No. 4, | | Head and body injured by being caught by cars on gangway. |
| 28 | Robert McElvane, | American, .. | Driver, | 55 | M. | Audenried No. 4, | | Finger cut off by being caught between cars and top of oil. Outside. |
| | Jubish Adom, | Russian, | Laborer, | 22 | S. | Silver Creek, | | Leg fractured by explosion of blast at face of breast. |
| Oct. 6 | John Yatsko, | Slavonian, .. | Miner, | 51 | M. | Audenried No. 4, | Schuylkill, .. | Face, chest and arm injured by explosion of blast. |
| 9 | Mike Billy, | Russian, | Miner, | 35 | M. | Honey Brook No. 4, | | Two fingers crushed by car on gangway. |
| 11 | Arthur Brown, | American, .. | Driver, | 42 | M. | Audenried No. 5, | | Hands, back, face and neck burned by explosion of gas in chute. |
| | { Charles Christ, | Lithuanian, .. | Miner, | 19 | S. | { Eagle Hill, | | Finger cut off by being caught by cars on gangway. |
| 14 | { Dennis Tobin, | American, .. | Driver, | 24 | M. | { Honey Brook No. 5, .. | | Arm broken by being caught by cars on plane. |
| | John Tepko, | American, .. | Driver, | 19 | S. | Honey Brook No. 5, .. | | Leg broken by fall of slate on gangway. |
| 20 | Peter Dagus, | Polish, | Driver, | 13 | S. | Silver Creek, | | Toes crushed by piece of coal falling on iron breaker. Outside. |
| 21 | Anthony Soratski, | Polish, | Laborer, | 30 | S. | Silver Creek, | | Foot injured by being struck by timber while unloading it on slope. |
| 22 | Mann Philip, | Italian, | Laborer, | 22 | S. | Audenried No. 4, | | Leg fractured by being caught by cars. Outside. |
| 27 | Thomas Coper, | Slavonian, .. | Miner, | 23 | M. | Audenried No. 4, | | |
| Nov. 3 | Frank Mike, | Italian, | Oiler, | 40 | M. | Audenried No. 4, | | |
| | | | | 36 | M. | Audenried No. 4, | | |

| | | | | | | | | |
|------|----|-----------------------|----------------|-------------------|----|----|-----------------------|--|
| Nov. | 7 | Harry Rinker, | American, .. | Painter, | 13 | S. | Andenried No. 4, | Knee bruised by falling off ladder. Outside. |
| | 8 | Ivor Davis, | American, .. | Chafman, | 20 | S. | Buck Mountain, | Leg sprained. He slipped and fell while signaling engineer. |
| | 12 | Polumbo Pascome, .. | Italian, | Fireman, | 29 | S. | Andenried No. 4, | Hands and face scalded by water from hot ashes. Outside. |
| | 16 | Anthony Lambard, .. | Italian, | Driver, | 22 | S. | Morea, | Skull fractured by being kicked by a mule on gangway. |
| | 17 | Joseph Labudo, | Slavonian, .. | Loader, | 31 | M. | Andenried No. 4, | Back bruised by being struck by a plank that was thrown from breaker. Outside. |
| Dec. | 3 | Metro Hatzko, | Slavonian, .. | Laborer, | 47 | M. | Buck Mountain, | Leg fractured by fall of slate near face of gangway. |
| | 4 | Charles Minswurge, .. | Lithuanian, .. | Driver, | 19 | S. | Silver Creek, | Leg broken by mule falling on him on gangway. |
| | 7 | John Yearlich, | Polish, | Miner, | 53 | M. | Middle Lehigh, | Shoulder dislocated by fall of coal in breast. |
| | 12 | Frank Schiapa, | Polish, | Miner, | 33 | M. | Eagle Hill, | Head and body injured by fall of roof at face of gangway. |
| | 28 | Thomas Schman, | Slavonian, .. | Company man, .. | 38 | M. | Honey Brook No. 5, .. | Finger injured by being caught by car on dump. Outside. |
| | 30 | John Nester, | Russian, ... | Miner, | 23 | S. | Andenried No. 4, | Thumb crushed by being struck by a piece of coal at face of gangway. |
| | 31 | John Covei, | Polish, | Chute boss, | 22 | S. | Middle Lehigh, | Mouth lacerated by falling down a flight of steps. Outside. |

Schuylkill, ..

CONDITION OF COLLIERIES

LEHIGH AND WILKES-BARRE COAL COMPANY

Andenried No. 4 and Honey Brook No. 5 Collieries.—Ventilation, drainage and condition as to safety, good.

PHILADELPHIA AND READING COAL AND IRON COMPANY

Silver Creek Colliery.—Ventilation, drainage and condition as to safety, good.

Eagle Hill Colliery.—Ventilation fair. Drainage and condition as to safety, good.

DODSON COAL COMPANY

Morea Colliery.—Ventilation, drainage and condition as to safety, good.

MARYD COAL COMPANY

Maryd Colliery.—Ventilation and condition as to safety, good. Drainage bad.

COXE BROTHERS AND COMPANY, INCORPORATED

Oneida Colliery.—Ventilation, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Buck Mountain Colliery.—Ventilation, drainage and condition as to safety, good.

MILL CREEK COAL COMPANY

Middle Lehigh and Wolf Creek Collieries.—Ventilation, drainage and condition as to safety, good.

EAST LEHIGH COAL COMPANY

East Lehigh Colliery.—Ventilation and condition as to safety, good. Drainage fair.

PORT CARBON COAL COMPANY

Lucy R. Colliery.—Ventilation and condition as to safety, good. Drainage bad.

GORMAN AND CAMPION

Bell Colliery.—Ventilation and condition as to safety good. Drainage bad.

IMPROVEMENTS

LEHIGH AND WILKES-BARRE COAL COMPANY

Andenried No. 4 Colliery.—Tunnel was driven from the Mammoth to the Lykens vein in No. 9 basin, No. 23 slope.

Inside slope in the Gamma vein shaft basin was driven 600 feet and electric hoist installed.

Honey Brook No. 5 Colliery.—Tunnel was driven from the Lykens to the Buck Mountain vein No. 3 east No. 20 slope.

Tunnel was driven from the Lykens to the Buck Mountain vein No. 4 east No. 20 slope.

PHILADELPHIA AND READING COAL AND IRON COMPANY

Silver Creek Colliery.—The tunnel from the East Boston Split vein to the Top Split vein, No. 4 drift, mentioned in last year's report has been finished a distance of 190 feet.

The new drift No. 15 on Skidmore mentioned in last year's report has been finished and is now being robbed.

The 6-inch cast iron fresh water line from Palmer vein dam to connect on the main 6 inch line to colliery has been completed. A 2,000 gallon capacity dam, with concrete breast, has been built at head of pipe line.

Number 9 drift on Skidmore and Bottom Split has been finished and is now being robbed.

A tunnel has been driven from the East Middle Split to Top Split No. 4 drift, a distance of 110 feet.

A tunnel has been driven from the West Top Split, south dip, to Holmes No. 4 drift, a distance of 182 feet.

A tunnel has been driven from the West Top Split, south dip, to Middle Split No. 4 drift, a distance of 60 feet.

A tunnel has been driven from the West Skidmore to the Bottom Split at breast No. 7, No. 1 plane level, a distance of 105 feet.

A tunnel has been driven from the West Bottom Split to the Skidmore, shaft level, a distance of 70 feet.

A tunnel has been driven from the Bottom Split to the Top Split vein, No. 12 drift, a distance of 155 feet.

A tunnel has been driven from the West Middle Split to the Bottom Split, No. 4 drift, a distance of 95 feet.

A tunnel is now being driven from the Top Split to the Holmes, east inside section, No. 4 drift.

A new double track automatic landing is being driven from the West Orchard gangway, No. 4 plane, to the coal shaft.

A series of diamond drill holes have been drilled from the East Middle Split No. 3 plane, and the East Middle Split No. 4 plane, to test the thickness of the barrier pillar between Silver Creek and Kaska William.

A drill room in rock has been driven south from the East Middle Split, No. 4 plane, a distance of 45 feet; and a 4-inch diamond drill hole, drilled horizontal for 193 feet 11 inches, tapped Kaska William water.

An inside slope has been driven in the East Middle Split, No. 3 plane, level, a distance of 206 feet.

A new drift, No. 15, on the Bottom Split vein, has been started.

The gangway on the seven foot vein mentioned in last year's report, to tap Windy Harbor water, starting from No. 11 water hole driven from the West Skidmore, No. 4 plane, has been continued 125 feet. A diamond drill rig will be placed at face of gangway with a view to tapping the above-mentioned water.

A tunnel will be driven from the West Top Split, No. 4 plane, to the Bottom Split. Windy Harbor basin, curve having been turned. Estimated length 54 yards.

Grading has been started for an electric dump car track east of the breaker. It is the intention to have an electric dump car handle and dispose of all the breaker refuse.

Eagle Hill Colliery.—A tunnel has been driven on the 6th lift from No. 73 chute on the West Skidmore gangway, southward, a distance of 200 feet to the Top Split and Bottom Split veins. A gangway has been turned west on the Top Split vein.

A tunnel is being driven on the 6th lift from No. 32 chute on the West Skidmore gangway to the seven foot gangway. This tunnel and the seven foot gangway will replace a portion of the West Skidmore gangway as a haulageway for the coal from Nos. 2 and 3 tunnels.

Work is progressing on the new landing mentioned in last year's report. For a distance of 30 feet on both sides of the shaft the roof of the tunnel is supported by structural steel mine supports.

A concrete battery 3 feet thick has been erected near the bottom of the Holmes slope and after removing the pump, culm pipe etc., the slope was filled with slush to a point within a few feet of the knuckle.

A mule and traveling-way has been driven to the surface from the East Primrose water level gangway in the Primrose slope.

The loaded track tunnel on the 6th. lift has been concreted a distance of 260 feet from the shaft. Several sets of steel mine supports have also been erected in this tunnel.

An addition has been made to the breaker and 2 buckwheat jigs have been installed.

The installation of the electric dump car and the building of the breaker refuse hopper mentioned in last year's report have been completed. The track for this car has been extended a distance of 1,400 feet south of the breaker.

MARYD COAL COMPANY

Maryd Colliery.—New pump house, second level, 12 feet high, 18 feet wide and 65 feet long, erected of steel timber.

645 feet culm way in small vein under Orchard vein from 2nd level pump house to surface was erected with steel timber.

Installed 1 Goyne duplex compound pump for 2nd level, 24 by 42 by 14 by 48 inches, with 12 by 18 by 18 inches condenser; also 675 feet of 14-inch wood lined culm pipe.

On first level, No. 1 basin, a tunnel was driven south 212 feet from Top Split cutting four foot and Holmes veins.

On the 2nd. level, 159 feet of tunnel and 160 feet of gangway were driven in Holmes vein for sump.

A tunnel was driven south from the Bottom Split, 2nd level, 355 feet cutting Middle Split and Holmes veins.

Erected fireproof washhouse of hollow tile with steel and cement roof, equipped with 144 steel lockers; 300 H. P. battery of Stirling water tube boilers with 16-inch header connection.

Installed 72-inch No. 9 Sirocco fan for force draft at main boiler plant driven by 15 by 15 inch high speed engine.

Completed reservoir for fresh water on Swift Creek, capacity 10 million gallons.

Installed 1 double 4-foot Lehigh Valley jig in breaker.

LEHIGH VALLEY COAL COMPANY

Buck Mountain Colliery.—A tunnel 410 feet long was driven from the East Mammoth Bottom Split, south dip, to the East Mammoth Bottom Split, north dip, 2nd level.

The erection of structural steel on the 5th. level bottom for the support of the roof, mentioned in last year's report, has been completed. A ventilation tunnel 297 feet long was driven from the Mammoth Bottom Split, south dip, to the Buck Mountain vein, south dip, on the 5th. level.

The multi-vein fans in the boiler house were replaced by a 12 by 6 foot steel plate fan driven by a 14 by 20 inch Coxe engine. A 3-inch steam line was constructed from the wash-water pump-house to the Mammoth Top Split spoon plane engine house, a distance of 2,500 feet.

MILL CREEK COAL COMPANY

Middle Lehigh Colliery.—A tunnel 128 feet long was driven in No. 11 slope from the seven foot to the Skidmore. Commenced stripping of the top split of the Mammoth vein second section. Drove 5,506 feet of gangway. Considerable safety work as to guards about machinery, etc., was done. An artesian well 638 feet deep was drilled for boiler feed water.

Wolf Creek Colliery.—Tunnel from Skidmore to Buck Mountain vein in slope was completed, distance 218 feet. A Goyne pump 24 by 10 by 36 inches was installed in the slope. Completed 2,210 feet of stripping on the outcrop of the Scott steel vein. Drove 4,536 feet of gangway. A return tubular boiler plant erected of 450 H. P. boilers. Also erected 2,800 feet of 6-inch steam line from the boilers to the hoisting engine and pumps. Installed an air compressor and pipe line; also a shaker and platform at tippie. A sump was made in the Skidmore vein. Laid 4,500 feet of 2-inch wood pipe line for boiler feed water.

PORT CARBON COAL COMPANY

Lucy R. Colliery.—A rock slope is being made from the surface 500 feet on 30 degrees pitch, 210 feet have been driven and they expect to complete it in 1916.

Installed 1 electric compressor and 1 electric Cameron pump 3½ by 6 inches.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in Pottsville, May 18, 19, and 20. The Board of Examiners was composed of M. J. Brennan, Mine Inspector, Pottsville; Luke Stiles, Superintendent, Silver Creek; William J. Brennan, Miner, Port Carbon; James Curran, Miner, Silver Creek.

The following persons passed a satisfactory examination and were granted certificates:

ASSISTANT MINE FOREMEN

Charles Gallagher, Silver Creek; William Tennant, Tamaqua.



NINETEENTH DISTRICT

SCHUYLKILL COUNTY

Pottsville, Pa., February 26, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Nineteenth Anthracite District for the year ending December 31, 1915,

Respectfully submitted,

MICHAEL J. BRENNAN,

Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 17 |
| Number of mines, | 49 |
| Number of mines in operation, | 45 |
| Number of tons of coal shipped to market, | 2,910,036 |
| Number of tons used at mines for steam and heat, | 510,566 |
| Number of tons sold to local trade and used by employes, | 43,421 |
| Number of tons produced, | 3,464,023 |
| Number of tons produced by compressed air machines, .. | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 4,989 |
| Number of persons employed outside, | 2,402 |
| Number of fatal accidents inside of mines, | 25 |
| Number of fatal accidents outside, | 5 |
| Number of non-fatal accidents inside of mines, | 32 |
| Number of non-fatal accidents outside, | 5 |
| Number of tons of coal produced per fatal accident inside, | 138,561 |
| Number of tons produced per fatal accident outside, | 692,805 |
| Number of tons produced per fatal accident inside and outside, | 115,467 |
| Number of persons employed per fatal accident inside, .. | 200 |
| Number of persons employed per fatal accident outside, .. | 480 |
| Number of persons employed per fatal accident inside and outside, | 246 |
| Number of persons employed per non-fatal accident inside, .. | 156 |
| Number of persons employed per non-fatal accident outside, | 480 |
| Number of persons employed per non-fatal accident inside and outside, | 200 |
| Number of wives made widows, | 18 |
| Number of children made orphans, | 24 |
| Number of steam locomotives used inside of mines, | 1 |
| Number of steam locomotives used outside, | 46 |
| Number of compressed air locomotives used inside, | 1 |
| Number of compressed air locomotives used outside, .... | ..... |
| Number of electric motors used inside, | 25 |
| Number of electric motors used outside, ..... | ..... |
| Number of gasoline locomotives used inside, ..... | ..... |
| Number of fans in use, | 40 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 32 |
| Number of non-gaseous mines in operation, | 13 |
| Number of new mines opened, ..... | ..... |
| Number of old mines abandoned, ..... | ..... |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|--|-----------|
| Philadelphia and Reading Coal and Iron Company, | 1,365,221 |
| St. Clair Coal Company, | 366,804 |
| Lytle Coal Company, | 355,030 |
| Pine Hill Coal Company, | 313,305 |
| Oak Hill Coal Company, | 296,840 |
| Buck Run Coal Company, | 286,595 |
| Darkwater Coal Company, | 137,026 |
| Mt. Hope Coal Company, | 133,730 |
| White and Company, | 100,185 |
| Emperor Coal Company, | 54,622 |
| Ellsworth Coal Company, | 34,238 |
| Butcher Creek Coal Company, | 16,000 |
| Black Heath Coal Company, | 4,427 |
| <hr/> | |
| Total, | 3,464,023 |
| <hr/> | |

Production by Counties

| | |
|-------------------|-----------|
| Schuylkill, | 3,464,023 |
| <hr/> | |

TABLE B.—Fatal and non-fatal accidents inside and outside of mine; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|---|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| Philadelphia and Reading Coal and Iron Co., | 8 | 1 | 10 | 9 | 1 | 10 | 170,157 | 151,031 | 2,785 | 945 | 3,060 | 273 | 452 | 247 | 905 |
| St. Clair Coal Co., | 4 | 1 | 5 | 5 | 1 | 6 | 91,701 | 183,402 | 353 | 348 | 701 | 48 | 318 | 176 | 176 |
| Liberty Coal Co., | 3 | 1 | 4 | 2 | 1 | 3 | 118,313 | 130,719 | 610 | 244 | 854 | 293 | ... | 87 | 244 |
| York Hill Coal Co., | 2 | 1 | 3 | 2 | 1 | 3 | 156,652 | 126,952 | 513 | 194 | 707 | 356 | ... | 256 | ... |
| Oak Hill Coal Co., | 6 | 1 | 7 | 4 | 1 | 5 | 49,403 | 74,330 | 451 | 210 | 610 | 67 | 210 | 100 | ... |
| Buck Run Coal Co., | 1 | 1 | 2 | 4 | 1 | 5 | 71,649 | 141,549 | 141 | 141 | 593 | 451 | ... | 114 | 141 |
| Darkwater Coal Co., | ... | ... | ... | ... | 1 | 1 | ... | ... | 152 | 81 | 233 | ... | ... | ... | 81 |
| Mt. Hope Coal Co., | ... | ... | ... | ... | 1 | 1 | 133,730 | 144 | 57 | 87 | 144 | ... | ... | 57 | 87 |
| White and Co., | 1 | 1 | 2 | 3 | 1 | 4 | 33,395 | 236 | 154 | 82 | 236 | 154 | ... | 51 | ... |
| Ellsworth Coal Co., | ... | ... | ... | ... | ... | ... | ... | ... | 53 | 53 | 130 | ... | ... | ... | ... |
| Miscellaneous Companies, | ... | ... | ... | ... | ... | ... | ... | ... | 77 | 57 | 94 | ... | ... | ... | ... |
| Totals and averages, | 25 | 5 | 30 | 32 | 5 | 37 | 138,561 | 108,251 | 4,989 | 2,402 | 7,391 | 200 | 480 | 156 | 480 |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|---|----------|--------------|--------------|--------------|----------|--------------|----------|--------------|-----------|--------------|--------------|--------------|-----------|---------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, ..... | ..... | ..... | 2 | ..... | 1 | 1 | 1 | 1 | ..... | ..... | ..... | ..... | 6 | 24.00 |
| Falls of slate, ..... | ..... | ..... | 2 | ..... | 1 | ..... | ..... | 2 | ..... | 1 | ..... | ..... | 6 | 24.00 |
| Falls of roof, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4.00 |
| Mine cars, ..... | ..... | ..... | 1 | ..... | ..... | 1 | 1 | 1 | ..... | 1 | ..... | ..... | 5 | 20.00 |
| Explosions of gas, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 4 | 16.00 |
| Blasts, premature and otherwise, ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4.00 |
| Falling into slopes, etc., ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | 4.00 |
| Struck by prop, ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 4.00 |
| Totals, | 3 | 2 | 5 | ..... | 2 | 2 | 2 | 4 | 2 | 2 | ..... | ..... | 25 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | 1 | ..... | ..... | ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... | ..... | 3 | 60.00 |
| Falling, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 20.00 |
| Struck by windlass, .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 | 20.00 |
| Totals, | 1 | ..... | ..... | ..... | 1 | ..... | 2 | ..... | 1 | ..... | ..... | ..... | 5 | 100.00 |
| Grand totals inside and outside, | 4 | 2 | 5 | ..... | 3 | 2 | 4 | 4 | 3 | 2 | ..... | ..... | 30 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|---|--------------|--------------|----------|--------------|--------------|--------------|--------------|--------------|--------------|----------|--------------|--------------|-----------|---------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, ..... | ..... | ..... | 1 | ..... | 2 | ..... | 1 | ..... | ..... | 1 | 1 | ..... | 6 | 18.75 |
| Falls of slate, ..... | ..... | ..... | ..... | 1 | ..... | 1 | 1 | ..... | ..... | ..... | 2 | ..... | 6 | 18.75 |
| Mine cars, | 1 | ..... | 1 | 1 | ..... | 2 | ..... | 2 | 2 | ..... | ..... | ..... | 9 | 15.63 |
| Explosions of gas, | 1 | 2 | ..... | ..... | ..... | 2 | 1 | ..... | ..... | 2 | 1 | ..... | 5 | 28.13 |
| Blasts, premature and otherwise, ..... | ..... | 1 | 1 | 1 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4 | 12.50 |
| Machinery, ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 3.12 |
| Struck by piece of coal, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 3.12 |
| Totals, | 3 | 3 | 3 | 3 | 3 | 4 | 2 | ..... | 2 | 4 | 4 | ..... | 32 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 2 | 40.00 |
| Machinery, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 20.00 |
| Struck by piece of rock, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | 20.00 |
| Falling, ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 20.00 |
| Totals, ..... | ..... | ..... | 2 | ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | 1 | 5 | 100.00 |
| Grand totals inside and outside, | 3 | 3 | 5 | 3 | 3 | 4 | 3 | 1 | 2 | 5 | 4 | 1 | 37 | ..... |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|-----------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| Inside | | | | | | | | | | | | |
| Miners, | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 14 |
| Miners' laborers, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Drivers and runners, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Company men, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Fan turners, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Machinists, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Totals, | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 36 |
| Outside | | | | | | | | | | | | |
| Breaker bosses, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Repairmen, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Laborers, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Totals, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Grand totals inside and outside, | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 48 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|---|----------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|-----------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| Inside | | | | | | | | | | | | |
| Miners, | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 4 | 3 | 21 |
| Miners' laborers, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Drivers and runners, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Company men, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Engineers, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Totals, | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 4 | 4 | 32 |
| Outside | | | | | | | | | | | | |
| Blacksmiths and carpenters, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Slatepickers (boys), | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Laborers, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Totals, | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 12 |
| Grand totals inside and outside, | 4 | 4 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 5 | 5 | 44 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| Totals | | | | | | | | | | | | |
| American, | 1 | ... | 1 | ... | ... | 1 | 1 | 2 | 2 | ... | ... | ... |
| Polish, | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... |
| Hungarian, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Italian, | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | ... |
| Slavonian, | 3 | 2 | 2 | ... | 1 | 1 | 1 | 1 | ... | ... | ... | ... |
| Lithuanian, | ... | ... | 1 | ... | 1 | 1 | ... | 1 | ... | 1 | ... | ... |
| Austrian, | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | ... |
| Russian, | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... |
| Totals, | 4 | 2 | 5 | ... | 3 | 3 | 4 | 4 | 3 | 2 | ... | 30 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| Totals | | | | | | | | | | | | |
| American, | 1 | ... | 2 | ... | 2 | 1 | ... | ... | 1 | ... | 1 | 1 |
| Polish, | 1 | ... | ... | 1 | ... | ... | ... | 1 | ... | 1 | 2 | ... |
| Hungarian, | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | 1 | ... |
| Slavonian, | ... | ... | ... | ... | ... | 1 | 2 | ... | ... | 2 | ... | ... |
| Lithuanian, | 1 | ... | 1 | ... | 1 | ... | 2 | ... | ... | 1 | ... | ... |
| Austrian, | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Russian, | ... | 1 | 1 | 1 | ... | ... | ... | ... | ... | 1 | ... | ... |
| Totals, | 3 | 3 | 5 | 3 | 3 | 4 | 3 | 1 | 2 | 5 | 4 | 37 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Area of furnace bars in square feet | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|--|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|-------------|------------|-------------------------------------|----------------------------------|---|--|--|-----------------------------------|
| Philadelphia and Reading Coal and Iron Co. | | | | | | | | | | | | | | | | |
| Otto Colliery: | | | | | | | | | | | | | | | | |
| Otto White Ash, | Drift, | Gaseous, .. | { Fan, ... | 15 | 5. | 3.5 | 84 | 1.25 | Guibal, .. | Steam, .. | .. | 8 | 67,720 | { 102,000 | 70,610 | 531 |
| Otto Mud, | Drift, | Non-gas., .. | { Fan, ... | 21 | 7. | 6. | 89 | 1.5 | Guibal, .. | Steam, .. | .. | 5 | 72,415 | { 81,430 | 81,430 | |
| Otto, | Shaft, | Gaseous, .. | Fan, | 12 | 4.2 | 3.6 | 40 | 1. | Guibal, .. | Steam, .. | .. | 3 | 30,700 | { 25,000 | 35,320 | |
| Otto Red Ash, | Slope, | Gaseous, .. | Fan, | 18 | 6. | 5.6 | 45 | .6 | Guibal, .. | Steam, .. | .. | 2 | 21,869 | { 80,000 | 25,782 | |
| Wadesville Colliery: | | | | | | | | | | | | | | | | |
| Wadesville, | Shaft, | Gaseous, .. | Fan, | 21 | 7. | 6.2 | 73 | 1.6 | Guibal, .. | Steam, .. | .. | 25 | 173,930 | 137,870 | 165,815 | 498 |
| Wadesville, | Shaft, | Gaseous, .. | Fan, | 21 | 7. | 6.2 | 63 | 1.7 | Guibal, .. | Steam, .. | .. | 4 | 19,150 | { 15,810 | 19,345 | |
| Wadesville, Vulcan, | Slope, | Gaseous, .. | Fan, | 8 | 2.8 | 2.2 | 116 | 1.2 | Guibal, .. | Steam, .. | .. | 5 | 23,170 | { 23,400 | 25,135 | |
| Wadesville, Primrose, .. | Slope, | Gaseous, .. | Fan, | 15 | 5. | 4.6 | 56 | 1. | Guibal, .. | Steam, .. | .. | 7 | 26,520 | { 22,785 | 26,830 | |
| Wadesville, Beechwood, .. | Drift, | Gaseous, .. | Fan, | 18 | 6. | 5.6 | 42 | .4 | Guibal, .. | Steam, .. | .. | .. | .. | .. | .. | 441 |
| Pine Knot Colliery: | | | | | | | | | | | | | | | | |
| Pine Knot Number 1, .. | { Shaft, .. | Gaseous, .. | Fan, | 21 | 7. | 6. | 78 | 1.8 | Guibal, .. | Steam, .. | .. | 6 | { 53,015 | { 35,500 | 63,490 | |
| Pine Knot, Number 2, .. | { Shaft, .. | Gaseous, .. | Fan, | 18 | 6. | 5.2 | 98 | 1.4 | Guibal, .. | Steam, .. | .. | 9 | { 70,365 | { 62,206 | 78,800 | |
| Thomaston, Section | { Slope, ... | Gaseous, .. | Fan, | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 434 |
| Lehr, | Drift, | Non-gas., .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Thomaston, Crosby, .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Thomaston, * | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| Phoenix Park Colliery: | | | | | | | | | | | | | | | | |
| Phoenix Park, Diamond, .. | Slope, | Gaseous, .. | Fan, | 15 | 5. | 3.5 | 90 | 1.4 | Guibal, .. | Steam, .. | .. | 24 | 143,010 | 110,420 | 161,580 | 434 |
| Phoenix, Peach Mount, .. | Slope, | Gaseous, .. | Fan, | 21 | 7. | 6. | 90 | 2. | Guibal, .. | Steam, .. | .. | .. | .. | .. | .. | |
| Phoenix Park, Number 6, .. | Slope, | Gaseous, .. | Fan, | 15 | 5. | 3.5 | 115 | 1. | Guibal, .. | Steam, .. | .. | 8 | 57,425 | 48,825 | 59,175 | *Idle. |
| .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |

*Idle.

| | | | | | | | | | | | | | | |
|--|--|--------------|--------------|-------|-------|-------|-------|-------|--------------|-------------------|-------|----------|----------|----------|
| Glendower Colliery: Glendower, Buck Glendower, West, Glendower, Number 1, Glendower, * Number 2, |) Slope, ... Slope, ... Slope, ... Drift, ... Drift, | Gaseous, ... | Fan, ... | 21 | 6, 10 | 6. | 90 | 2. | Guibal, ... | Steam, ... | 9 | 90, 370 | 47, 440 | 92, 290 |
| | | Gaseous, ... | Fan, ... | 15 | 6. | 5. | 76 | 1.6 | Guibal, ... | Steam, ... | 9 | 75, 650 | 46, 020 | 75, 220 |
| | | Non-gas, ... | Fan, ... | 15 | 4.6 | 5. | 46 | .4 | Guibal, ... | Elec- tricity. | 8 | 43, 340 | 20, 040 | 43, 250 |
| | | Non-gas, ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| John Veith Colliery: John Veith Number 1,* John Veith Number 2,* |) Shaft, ... Shaft, ... | Gaseous, ... | Fan, ... | 15 | 5. | 4.6 | 50 | .3 | Guibal, ... | Steam, ... | 8 | 25, 000 | 27, 100 | 29, 200 |
| | | Gaseous, ... | Fan, ... | 15 | 5. | 4.6 | 50 | .3 | Guibal, ... | Steam, ... | 10 | 35, 000 | 26, 950 | 36, 500 |
| St. Clair Coal Co. St. Clair Colliery: St. Clair, ... St. Clair, ... St. Clair, ... |) Slope, ... Drift, ... Shaft, ... | Gaseous, ... | { Fan, ... | 16 | 5. | 5. | 75 | .5 | Guibal, ... | Steam, ... | 5 | 43, 530 | 40, 500 | 49, 900 |
| | | Non-gas, ... | Natural, ... | 11 | 5. | 3.6 | 90 | 1.2 | Guibal, ... | Steam, ... | 5 | 63, 580 | 52, 430 | 66, 250 |
| | | Non-gas, ... | Natural, ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| | | Non-gas, ... | Natural, ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Lytle Coal Co. Lytle Colliery: Lytle, ... Lytle, ... |) Shaft, ... Slope, ... | Gaseous, ... | { Fan, ... | 18 | 7 | 5, 10 | 90 | 2.2 | Guibal, ... | Steam, ... | ..... | ..... | ..... | ..... |
| | | Gaseous, ... | { Fan, ... | 18 | 7 | 5, 10 | 94 | 2.1 | Guibal, ... | Steam, ... | ..... | ..... | ..... | ..... |
| | | Gaseous, ... | { Fan, ... | 12 | 6. | 2. | 105 | 2.3 | Guibal, ... | Elec- tricity. | 3 | 300, 120 | 190, 120 | 320, 600 |
| Pine Hill Coal Co. Pine Hill Colliery: Pine Hill, ... Pine Hill, ... Pine Hill, ... |) Shaft, ... Slope, ... Slope, ... Drift, ... | Gaseous, ... | Fan, ... | 18 | 4. | 4. | 110 | 1.2 | Guibal, ... | Elec- tricity. | 7 | 65, 200 | 42, 350 | 67, 500 |
| | | Gaseous, ... | { Fan, ... | 20 | 6. | 6. | 76 | 1.5 | Guibal, ... | Steam, ... | ..... | ..... | ..... | ..... |
| | | Gaseous, ... | { Fan, ... | 12 | 4.6 | 4. | 110 | 1.2 | Guibal, ... | Steam, ... | 6 | 47, 000 | 23, 200 | 45, 350 |
| | | Gaseous, ... | Fan, ... | 13 | 4. | 4. | 100 | 1.2 | Guibal, ... | Elec- tricity. | 2 | 30, 000 | 23, 600 | 32, 000 |
| Oak Hill Coal Co. Oak Hill Colliery: Oak Hill, ... Oak Hill, ... Oak Hill, ... |) Shaft, ... Slope, ... Drift, ... Drift, | Gaseous, ... | { Fan, ... | 12 | 4. | 4. | 90 | 1.5 | Guibal, ... | Steam, ... | 5 | 46, 900 | 38, 170 | 48, 800 |
| | | Gaseous, ... | { Fan, ... | 18 | 6. | 4. | 90 | 1.5 | Vulcan, ... | Steam, ... | 5 | 110, 010 | 45, 640 | 112, 290 |
| | | Gaseous, ... | { Fan, ... | 24 | 8.3 | 6.4 | 70 | 1.25 | Vulcan, ... | Steam, ... | 16 | 138, 920 | 84, 600 | 140, 200 |
| | | Non-gas, ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Buck Run Coal Co. Buck Run Colliery: Buck Run, ... Buck Run, ... |) Slope, ... Slope, ... Slope, ... | Gaseous, ... | Fan, ... | 12 | 4. | 4. | 95 | 1.5 | Guibal, ... | Steam, ... | 3 | 35, 000 | ..... | ..... |
| | | Gaseous, ... | { Fan, ... | 16 | 6. | 5. | 95 | 1.5 | Guibal, ... | Steam, ... | 4 | 44, 000 | 97, 500 | 117, 500 |
| | | Gaseous, ... | { Fan, ... | 16 | 4. | 5. | 95 | ..... | Strocco, ... | Steam, ... | 4 | 50, 000 | ..... | ..... |
| Darkwater Coal Co. New Castle Colliery: Newcastle, ... Newcastle, ... |) Slope, ... Slope, ... Slope, ... | Gaseous, ... | Fan, ... | 20 | 6. | 6. | 70 | 1.5 | Vulcan, ... | Steam, ... | 2 | 45, 000 | 51, 000 | 57, 000 |
| | | Gaseous, ... | Fan, ... | 10 | 3. | 3. | 80 | 1.5 | Vulcan, ... | Steam, ... | 4 | ..... | ..... | ..... |

*ville

†Broken strata.

TABLE I.—Continued

| Names of Operators and Mines | Number of persons employed inside | Number of cubic feet of air per minute passing out at outlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute entering the mine at inlet | Number of splits of air currents | Area of furnace bars in square feet | Power used | Name of fan | Water gauge developed—in inches | Number of revolutions per minute | Depth of blades in feet and inches | Width of blades in feet and inches | Diameter of fan in feet and inches | Method of ventilation | Gaseous or non-gaseous | Kind of opening |
|------------------------------|-----------------------------------|--|--|---|----------------------------------|-------------------------------------|------------|-------------|---------------------------------|----------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------|------------------------|-----------------|
| Mt. Hope Coal Co. | 57 | 154 | 77 | 25 | 12 | | | | | | | | | | | |
| Mt. Hope Colliery: | | | | | | | | | | | | | | | | |
| Mt. Hope, Number 8. | ..... | 34,500 | 22,000 | 33,000 | 4 | ..... | Steam, | Guibal, | .4 | 65 | 3.4 | 4.2 | 12 | Natural. | Non-gas. | Slope,..... |
| Mt. Hope, Number 9. | ..... | 19,000 | 16,000 | 18,000 | 4 | ..... | Steam, | Guibal, | .6 | 65 | 3.8 | 3. | 10 | } Fan, ... | Gaseous, .. | Slope,..... |
| Mt. Hope, Number 10. | ..... |  |  |  |  |  |  |  |  |  |  |  |  | Natural. | Non-gas. | Slope,..... |
| White and Co. | | | | | | | | | | | | | | | | |
| Howard Colliery: | | | | | | | | | | | | | | | | |
| Howard No. 1. | ..... |  |  |  |  |  |  |  |  |  |  |  |  | } Fan, ... | Gaseous, .. | Slope,..... |
| Howard No. 2. | ..... |  |  |  |  |  |  |  |  |  |  |  |  | Fan, | Gaseous, .. | Slope,..... |
| Howard No. 3. | ..... |  |  |  |  |  |  |  |  |  |  |  |  |  | Gaseous, .. | Slope,..... |
| Ellsworth Coal Co. | | | | | | | | | | | | | | | | |
| Ellsworth Colliery: | | | | | | | | | | | | | | | | |
| Ellsworth, ..... | ..... |  |  |  |  |  |  |  |  |  |  |  |  | Natural, .. | Non-gas., .. | Slope,..... |
| Butcher Creek Coal Co. | | | | | | | | | | | | | | | | |
| Laurel Run Colliery: | | | | | | | | | | | | | | | | |
| Laurel Run, ..... | ..... |  |  |  |  |  |  |  |  |  |  |  |  | Natural. | Non-gas., .. | Slope,..... |
| Laurel Run, ..... | ..... |  |  |  |  |  |  |  |  |  |  |  |  | Natural. | Non-gas., .. | Drift, |
| Black Heath Coal Co. | | | | | | | | | | | | | | | | |
| Black Heath Colliery: | | | | | | | | | | | | | | | | |
| Black Heath, ..... | ..... |  |  |  |  |  |  |  |  |  |  |  |  | Natural, .. | Non-gas., .. | Slope, |

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|--|------------------|--------------------------------|--------------------|------------------------|-------------------|--------------------------|
| Philadelphia and Reading Coal and Iron Co. | { Schuylkill, } | E. E. Kaercher, | Pottsville, | E. J. Weimer, | Pottsville, | Philadelphia and Reading |
| Otto, | | W. T. Smythe, | Pottsville, .... | ..... | ..... | Philadelphia and Reading |
| Wadesville, | | Robert A. Quin, | Wilkes-Barre, | D. V. Randall, | Minersville, | Pennsylvania |
| Pine Knot, | | George M. Keiser, .. | Minersville, .... | ..... | ..... | Pennsylvania |
| Phoenix Park, | | Thomas M. Righter, .. | Mt. Carmel, | C. F. Cartwright, .. | Duncott, | Philadelphia and Reading |
| Glendover, | Schuylkill, | James B. Neale, | Minersville, .... | ..... | ..... | Philadelphia and Reading |
| John Verth, | Schuylkill, | James B. Neale, | Minersville, | John Conway, | Pottsville, | Pennsylvania |
| Anchor Washery, | Schuylkill, | I. D. Beahme, | Port Carbon, .... | ..... | ..... | Philadelphia and Reading |
| St. Clair Coal Co. | Schuylkill, | Robert White, | Pottsville, .... | ..... | ..... | Philadelphia and Reading |
| St. Clair, | Schuylkill, | George M. Keiser, .. | Pottsville, .... | ..... | ..... | Pennsylvania |
| Lytle Coal Co. | Schuylkill, | George M. Keiser, .. | Pottsville, .... | ..... | ..... | Philadelphia and Reading |
| Lytle, | Schuylkill, | L. J. Whims, | St. Clair, .... | ..... | ..... | Philadelphia and Reading |
| Pine Hill Coal Co. | Schuylkill, | James Scott, | Minersville, .... | ..... | ..... | Philadelphia and Reading |
| Pine Hill, ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Oak Hill Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... |
| Oak Hill, ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Buck Run Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... |
| Buck Run, ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Darkwater Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... |
| Newcastle, ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Mt. Hope Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... |
| Mt. Hope, ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| White and Co. | ..... | ..... | ..... | ..... | ..... | ..... |
| Howard, ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Emperor Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... |
| Emperor Washery, ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Edsforth Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... |
| Edsforth, ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Butcher Creek Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... |
| Laurel Run, ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Black Heath Coal Co. | ..... | ..... | ..... | ..... | ..... | ..... |
| Black Heath, ..... | ..... | ..... | ..... | ..... | ..... | ..... |

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|--|-------------|--|--|--|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Philadelphia and Reading Coal and Iron Co. | Schuylkill, | 258,350 | 61,940 | 1,430 | 324,530 | 222 | 714 | 1 | 4 | ..... | 88,412 | 44,338 | 85 |
| Otto, | | 278,747 | 29,101 | 1,783 | 319,631 | 235 | 664 | 1 | 4 | ..... | 46,900 | 97,040 | 57 |
| Wadesville, | | 230,691 | 58,553 | 2,033 | 281,277 | 215 | 723 | 2 | ..... | 15,125 | 157,857 | 26,413 | 60 |
| Pine Knot, | | 191,468 | 30,098 | 2,485 | 224,151 | 229 | 587 | 3 | ..... | ..... | 57,898 | 98,039 | 63 |
| Phoenix Park, | | 161,622 | 16,506 | ..... | 178,128 | * | 324 | ..... | ..... | 1,800 | 109,463 | 8,491 | 51 |
| Glendover*, | | 207 | ..... | ..... | 207 | † | 21 | ..... | ..... | ..... | 225 | ..... | 2 |
| John Vaith,† | Schuylkill, | 1,110,985 | 209,198 | 7,721 | 1,327,904 | ..... | 3,033 | 10 | 10 | 16,925 | 460,845 | 274,321 | 318 |
| Anchor Washery, | | 32,644 | 2,043 | 2,610 | 37,317 | 95 | 57 | ..... | ..... | ..... | 792 | ..... | ..... |
| Totals, | | 1,143,649 | 211,241 | 10,331 | 1,365,221 | ..... | 3,090 | 10 | 10 | 16,925 | 461,637 | 274,321 | 318 |
| St. Clair, | Schuylkill, | 289,832 | 69,025 | 7,947 | 366,804 | 241 | 701 | 5 | 2 | 260,775 | 70,968 | ..... | 45 |
| St. Clair Coal Co. |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Lytle Coal Co. | Schuylkill, | 272,513 | 72,400 | 10,117 | 355,030 | 240 | 854 | 3 | 8 | ..... | 29,115 | 110,792 | 69 |
| Lytle, ..... |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Pine Hill Coal Co. | Schuylkill, | 273,314 | 38,600 | 1,391 | 313,305 | 272 | 707 | 2 | 2 | 60,000 | 68,675 | 72,000 | 36 |
| Pine Hill, ..... |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Oak Hill Coal Co. | Schuylkill, | 252,689 | 42,000 | 2,151 | 296,840 | 260 | 610 | 7 | 4 | 1,250 | 144,500 | 65,000 | 53 |
| Oak Hill, ..... |  | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

†Coal prepared at Otto breaker.

*Coal prepared at Pine Knot breaker.

[illegible]

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | | Locomotives | | | | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors | |
|---|-------------|-------------------|-------------|---------|-------------|-------------------|-------------|-------|-------|----------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|-------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Air | Electric | | | | | | | | |
| Philadelphia and Reading Coal and Iron Co., | Schuylkill, | 21 | 400 | 77 | 13,065 | 13,065 | ..... | 17 | 1 | 4 | 220 | 28,242 | 21 | 29,887 | 10,603 | ..... | ..... | ..... |
| St. Clair Coal Co., |  | ..... | ..... | 18 | 2,700 | 3,100 | ..... | 13 | ..... | 6 | ..... | 3,000 | ..... | 3 | 2,250 | 1,800 | ..... | ..... |
| Lexie Coal Co., |  | ..... | ..... | 27 | 3,900 | 3,900 | ..... | 1 | ..... | 4 | 21 | 7,287 | ..... | 3 | 2,500 | 1,417 | ..... | ..... |
| Pine Hill Coal Co., |  | ..... | ..... | 4 | 3,000 | 3,000 | ..... | ..... | ..... | 6 | ..... | 2,029 | ..... | 4 | 6,000 | 800 | ..... | ..... |
| Oak Run Coal Co., |  | ..... | ..... | 5 | 2,500 | 2,500 | ..... | 5 | ..... | ..... | 22 | 1,950 | ..... | 4 | 2,000 | 1,100 | ..... | ..... |
| Black Run Coal Co., |  | ..... | ..... | 9 | 1,800 | 1,800 | ..... | 3 | ..... | 5 | 20 | 1,029 | ..... | 5 | 9,500 | 1,000 | ..... | ..... |
| Arkwater Coal Co., |  | ..... | ..... | 6 | 1,200 | 1,200 | ..... | ..... | ..... | ..... | 26 | 1,029 | ..... | 5 | 4,500 | 1,000 | ..... | ..... |
| White Horse Coal Co., |  | ..... | ..... | 7 | 800 | 800 | ..... | 4 | ..... | ..... | 16 | 805 | ..... | 5 | 4,000 | 1,300 | ..... | ..... |
| White Horse Coal Co., |  | ..... | ..... | 5 | 675 | 675 | ..... | ..... | ..... | ..... | 11 | 725 | ..... | 4 | 2,500 | 900 | ..... | ..... |
| Emperor Coal Co., |  | ..... | ..... | 5 | 500 | 500 | ..... | 1 | ..... | ..... | 16 | 677 | ..... | 4 | ..... | ..... | ..... | ..... |
| Ellsworth Coal Co., |  | ..... | ..... | 2 | 200 | 200 | ..... | ..... | ..... | ..... | 8 | 270 | ..... | 3 | 1,350 | 500 | ..... | ..... |
| Butcher Creek Coal Co., |  | ..... | ..... | ..... | 200 | 200 | ..... | ..... | ..... | ..... | 11 | 350 | ..... | 4 | 450 | ..... | ..... | ..... |
| Black Heath Coal Co., |  | ..... | ..... | 1 | 120 | 120 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Totals, | ..... | 21 | 400 | 170 | 30,869 | 31,260 | 1 | 47 | 1 | 25 | 397 | 46,516 | 49 | 60,437 | 19,870 | ..... | 14 | 9 |

TABLE 3.—Number of each class of employes inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | | Outside | | | | | | | | Grand total | | |
|---|-------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|--------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|--------------------|-------------|---------------|-----|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employes | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | Bookkeepers and clerks | All other employes | | Total outside | |
| Philadelphia and Reading Coal and Iron Co., | Schuylkill, | 9 | 59 | ... | 734 | 213 | 125 | 5 | 20 | 397 | 613 | 2,185 | ... | 11 | 44 | 165 | 91 | 37 | 18 | 539 | 905 | 3,090 | |
| St. Clair Coal Co., | | 2 | ... | ... | 180 | 69 | 19 | 43 | 4 | ... | 68 | ... | 1 | 3 | 21 | 45 | 40 | 20 | 4 | 214 | 348 | 701 | |
| Lytle Coal Co., | | 1 | ... | ... | 262 | 98 | 43 | 2 | 9 | ... | 146 | ... | 1 | 1 | 16 | 42 | 68 | 16 | 8 | 92 | 244 | 854 | |
| Pine Hill Coal Co., | | 1 | ... | ... | 293 | 141 | 39 | 10 | 3 | ... | ... | ... | 2 | 1 | 1 | 24 | 18 | 35 | 16 | 5 | 96 | 194 | 707 |
| Oak Hill Coal Co., | | 1 | ... | ... | 296 | 46 | 32 | 8 | 4 | 74 | 18 | ... | 1 | 1 | 16 | 29 | 34 | 28 | 5 | ... | ... | ... | |
| Rock Run Coal Co., | | 1 | ... | ... | 147 | 108 | 15 | 5 | 4 | 2 | 105 | 451 | ... | 1 | 1 | 11 | 18 | 18 | 1 | 3 | 89 | 210 | 610 |
| Darkwater Coal Co., | | 1 | ... | ... | 44 | 45 | 15 | ... | ... | 7 | 34 | 152 | 1 | 1 | 6 | 12 | 11 | 1 | 1 | ... | ... | ... | |
| Mt. Hope Coal Co., | | 1 | ... | ... | 26 | 29 | 3 | ... | ... | ... | ... | ... | 1 | 1 | 3 | 16 | 10 | 3 | 1 | 50 | 81 | 233 | |
| White and Co., | | 1 | ... | ... | 57 | 53 | 9 | ... | ... | 23 | 8 | 154 | 1 | 1 | 3 | 12 | 15 | 4 | 1 | 44 | 82 | 236 | |
| Emperor Coal Co., | | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 2 | 4 | 5 | ... | ... | 21 | 35 | 135 | |
| Ellsworth Coal Co., | | 1 | ... | ... | 35 | 15 | 4 | ... | 2 | 19 | ... | ... | 1 | 1 | 2 | 6 | ... | 2 | 1 | 54 | 125 | 130 | |
| Butcher Creek Coal Co., | | 1 | ... | ... | 6 | 11 | 1 | ... | ... | 2 | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | ... | 17 | 19 | ... |
| Black Heath Coal Co., | | 1 | ... | ... | ... | 2 | ... | ... | ... | ... | ... | ... | 12 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Totals, | | 22 | 67 | 48 | 1,908 | 870 | 316 | 43 | 53 | 564 | 1,098 | 4,989 | 11 | 26 | 148 | 375 | 335 | 130 | 49 | 1,328 | 2,402 | 7,391 | |

TABLE 3.—Part 2

| Names of Operators | County | Average Number of Days Worked Monthly | | | | | | | | | | | | |
|---|-------------|---------------------------------------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|-------|
| | | January | February | March | April | May | June | July | August | September | October | November | December | Total |
| Philadelphia and Reading Coal and Iron Co., | Schuylkill. | 14 | 16 | 24 | 22 | 19 | 15 | 15 | 16 | 16 | 22 | 23 | 23 | 236 |
| St. Clair Coal Co., | | 21 | 19 | 20 | 26 | 15 | 15 | 20 | 21 | 21 | 20 | 23 | 23 | 211 |
| Lytle Coal Co., | | 11 | 15 | 18 | 25 | 23 | 20 | 16 | 21 | 19 | 20 | 24 | 24 | 232 |
| Pine Hill Coal Co., | | 22 | 18 | 21 | 22 | 21 | 21 | 22 | 25 | 25 | 26 | 24 | 24 | 233 |
| Duck Hill Coal Co., | | 22 | 18 | 21 | 22 | 21 | 21 | 22 | 25 | 25 | 26 | 24 | 24 | 235 |
| Duck Run Coal Co., | | 20 | 21 | 18 | 24 | 14 | 19 | 22 | 25 | 25 | 25 | 24 | 24 | 235 |
| Black River Coal Co., | | 14 | 22 | 25 | 22 | 24 | 18 | 16 | 23 | 24 | 25 | 24 | 24 | 235 |
| Mt. Hope Coal Co., | | 22 | 19 | 23 | 18 | 19 | 16 | 19 | 21 | 23 | 20 | 23 | 23 | 235 |
| White and Co., | | 24 | 25 | 23 | 22 | 23 | 24 | 24 | 24 | 24 | 24 | 23 | 23 | 245 |
| Ellsworth Coal Co., | | 15 | 22 | 24 | 24 | 25 | 26 | 26 | 22 | 25 | 26 | 26 | 26 | 248 |
| Butcher Creek Coal Co., | | 17 | 22 | 26 | 24 | 22 | 20 | 21 | 22 | 22 | 21 | 21 | 21 | 247 |
| Black Heath Coal Co., | | 22 | 23 | 25 | 24 | 24 | 25 | 25 | 21 | 23 | 26 | 23 | 23 | 246 |
| | | | 22 | 23 | 25 | 24 | 24 | 25 | 21 | 23 | 26 | 23 | 23 | 246 |
| | | | 22 | 23 | 25 | 24 | 24 | 25 | 21 | 23 | 26 | 23 | 23 | 246 |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------|---|----------------------------|------------------------|----------------|-------------------|------------------|-------------------|------------------|-----------------|--|
| Jan. 9 | Robert Fisher, | American.. | Miner, | 23 | S. | .. | .... | Pine Hill, | | Fatally burned by explosion of gas. His partner went to prepare a shot in heading and Fisher returned to face with naked light and ignited the gas. Died January 14. |
| 26 | Michael Gidus, | Slavonian.. | Repairman, .. | 29 | M. | 1 | 2 | St. Clair, | | Fatally injured. He stooped to pick up pin to couple car that was standing on track to car and truck of loads that were being hoisted near top of slope and in doing so he stepped on head of car and was killed. Died January 30. |
| 29 | { Andrew Cotsack, .. { John Malchick, | Slavonian.. Slavonian.. | Miner, .. Miner, .. | 42 M. 42 M. | M. M. | 1 1 | 1 } 1 } | Oak Hill, | | Fatally burned by explosion of gas. Malchick went to face of adjoining breast with naked light to measure thickness of pillar they were skipping after being warned by the fire boss that there was gas at the face. Malchick died February 7, and Cotsack February 8. |
| Feb. 8 | Stephen Popinchack, .. | Slavonian.. | Miner, | 40 | M. | 1 | .... | St. Clair, | Schenckkill, .. | Fatally injured by premature blast. He ignited blast at face of breast and the blast exploded before he could get away. Died February 10. |
| 27 | John Blowhue, | Slavonian.. | Miner, | 28 | M. | 1 | 4 | St. Clair, | | Killed by fall of rock at face of breast. The top rock commenced to move and he went to face to remove his tools and was caught by the fall. |
| March 3 | Joseph Zemoskie, | Slavonian.. | Miner, | 35 | M. | 1 | .... | St. Clair, | | Killed by fall of coal at face of breast while trimming down loose pieces after blast. |
| 9 | Eugene Depauly, | Italian, | Miner, | 27 | S. | .... | .... | Pine Hill, .. | | Killed by fall of slate while creeping under dividing slate at face of breast to get drill to pull the slate down. |
| 10 | George McCool, | American.. | Miner's laborer. | 19 | S. | .... | .... | Buck Run, | | Killed by fall of top coal in drilled hole in face of breast. He was near pillar face and while waiting for the miner to bring shot the coal fell. |

TABLE 4.—Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|-------------------------|---------------|------------------------|-----|-------------------|------------------|-------------------|------------------|-------------|--|
| March 18 | Anthony Bartnick,... | Lithuanian, | Miner, | 45 | M. | 1 | .... | Lytle, | | Fatally injured by fall of top slate while sinking top hole near face of breast. Died within 24 hours. |
| | Simon Solo, | Slavonian, .. | Driver, | 33 | M. | 1 | .... | Oak Hill, | | Fatally injured. He was leading team of mules around gangway curve, and when the team arrived in main tunnel he jumped on front of car and was caught by frame of car against tunnel rib. Died on the way to hospital. |
| May | 7 John Kutza, | Austrian, .. | Miner, | 33 | M. | 1 | 3 | Otto, | | Fatally injured by fall of top slate while scraping dirt from drill hole at face of chute. Died the same day. |
| | 8 Anthony Yerkes, | Lithuanian, | Breaker boss, .. | 21 | S. | .... | .... | Oak Hill, | | Fatally injured. He was removing refuse from coal pocket in breaker with hose and in some unknown manner he fell and struck his head against the side of pocket. Outside. Died the same day. |
| | 21 Michael Beratsko, .. | Slavonian, .. | Miner's laborer, | 36 | M. | 1 | .... | St. Clair, | Schuylkill, | Killed by fall of coal while working alongside of pillar in breast robbing. |
| June 17 | Michael Hinkle, | American, .. | Miner, | 39 | M. | 1 | 3 | Oak Hill, | | Skull fractured. He was going up to face of chute that he was driving, when a piece of slate fell at face. The slate rushed down the chute and struck and dislodged one of the brattice props, which struck him on the head. Died the following day. |
| | 21 John Mockl, | Slavonian, .. | Miner's laborer, .. | 36 | M. | 1 | 1 | Howard, | | Killed by runaway car on slope. When pushing car over knuckle of slope, the car broke loose, and he was thrown from and caught Mockl near bottom of slope. |
| | 29 Paul Malanack, | Russian, | Miner, | 43 | M. | 1 | 3 | Phoenix Park, .. | | Fatally injured by fall of top coal while loading car at face of breast. Died July 2. |
| July | 7 John Honesz, | Slavonian, .. | Miner, | 41 | M. | 1 | 2 | Oak Hill, | | Killed by fall of coal while trimming loose pieces of coal from pillar after blast. |

| | | | | | | | | | | | |
|-------|----|-------------------------|----------------|------------------|----|------|------|------|-----------------|-----|--|
| July | 9 | Savario Cochardino, ... | Italian, | Laborer, | 31 | S. | .... | .... | Wadesville, .. | ... | Killed by being caught by clay dumper while assisting to dump clay dumper on stripping, part of the clay and rock remained in the dumper which threw the weight to one side and caused the dumper to tilt from the track, outside. He fell from the track, outside. He was injured by falling from the dumper, which of empty railroad car under the breaker, with his back turned to car to him to warn him, and he jumped to one side and was caught between car and plank. Outside. Died July 21. |
| | 19 | Anthony Corack, | Austrian, .. | Laborer, | 20 | S. | .. | .... | Wadesville, .. | ... | Fatally injured by fall of slate while removing pillars. He was caught between car and plank. Outside. Died July 21. |
| | 29 | John Hughes, | American, .. | Company men. | 19 | S. | .... | .... | Pine Knot, .. | ... | Fatally injured by fall of slate while removing pillars. He was caught between car and plank. Outside. Died July 21. |
| Aug. | 5 | Michael Barla, ... | Lithuanian, | Miner's laborer. | 22 | S. | .... | .... | Phoenix Park, | ... | Fatally injured by fall of slate while removing pillars. He was caught between car and plank. Outside. Died July 21. |
| | 26 | Frank Bernitsky, ... | Polish, | Miner, | 35 | M. | 1 | 1 | Wadesville, .. | ... | Fatally injured by fall of slate while removing pillars. He was caught between car and plank. Outside. Died July 21. |
| | 31 | John Heenan, | American, .. | Driver, | 27 | S. | .... | .... | Wadesville, ... | ... | Fatally injured by fall of slate while removing pillars. He was caught between car and plank. Outside. Died July 21. |
| | 31 | Michael Boyer, | American, .. | Miner, | 54 | M. | 1 | .... | Oak Hill, | ... | Fatally injured by fall of slate while removing pillars. He was caught between car and plank. Outside. Died July 21. |
| Sept. | 11 | Thomas Fudock, | Hungarian, .. | Laborer, | 45 | M. | 1 | 3 | Ellsworth, | ... | Fatally injured by fall of slate while removing pillars. He was caught between car and plank. Outside. Died July 21. |
| | 27 | Edward Delaney, | American, .. | Fan turner, .. | 65 | S. | .... | .... | Pine Knot, .. | ... | Fatally injured by fall of slate while removing pillars. He was caught between car and plank. Outside. Died July 21. |
| | 20 | Robert Stevens, | American, .. | Machinist, | 62 | M. | 1 | .... | Lytle, | ... | Fatally injured by fall of slate while removing pillars. He was caught between car and plank. Outside. Died July 21. |
| Oct. | 18 | Klevie Shekitas, | Lithuanian, | Miner's laborer. | 21 | S. | .... | .... | Lytle, | ... | Fatally injured by fall of slate while removing pillars. He was caught between car and plank. Outside. Died July 21. |
| | 21 | Alexander Skatch, ... | Russian, | Miner's laborer. | 36 | .... | .... | .... | Phoenix Park, | ... | Fatally injured by fall of slate while removing pillars. He was caught between car and plank. Outside. Died July 21. |

Schryllkill, ..

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|------------------------------|----------------|---------------------|-----|-------------------|---------------------|---|---|
| Jan. 20 | Oscar Bell, | American,... | Miner, | 38 | S. | Pine Hill, | Schuylkill, | Face and hands burned by explosion of gas at face of breast. While igniting fuse attached to shot, with tobacco pipe, he ignited gas. |
| | Charles Rodgers, | Lithuanian, .. | Driver, | 22 | S. | Oak Hill, | | Body squeezed. He jumped from cars to speed his team of mules and in attempting to get on the cars he slipped and fell under them. |
| | Peter Zurock, | Polish,..... | Miner, | 28 | M. | Wadesville, | | Leg fractured. While running coal from breast into chute, a piece of coal rolled from the pile and struck him. |
| Feb. 3 | { Wash Farras, | Austrian, .. | Miner, | 33 | M. | { Wadesville, | | { Face and neck burned by gas. While tamping blast at face of breast, Opeat removed the top from his safety lamp to improve the light and ignited the gas. |
| | { Frank Opeat, | Austrian, .. | Miner, | 24 | M. | | | |
| 18 | Joseph Schwananav-age, | Russian, | Miner, | 24 | S. | Lytle, | | Head and body injured. He was tamping charge of dynamite at face of breast with steel drill when charge exploded. |
| March 8 | Frank Hostena, | Slavonian, .. | Miner's laborer, .. | 28 | M. | Howard, | | Head injured by fall of coal at face of breast while loading car. He was drilling out charge of powder at face of breast with drill when charge exploded. |
| 18 | Thomas Quinn, | American, .. | Miner, | 22 | S. | Oak Hill, | | Face and hand injured, at face of breast. |
| | John King, | American, .. | Laborer, | 23 | S. | Phoenix Park, | | Arm crushed. Caught between bumpers while coupling cars on breaker tip. Outside. |
| 29 | William Ramsey, ... | American, .. | Carpenter, | 39 | M. | Buck Run, | | Leg fractured. While repairing breaker he stepped on a plank that was laid over opening in floor and one end of plank slipped from its support, causing him to fall through opening. Outside. |
| 31 | John Andrew, | Slavonian, .. | Company man, .. | 29 | M. | Buck Run, | Toe crushed. Caught between car bumper and track while riding down slope on front of car. The car jumped the track. | |
| April 15 | Adolph Wainlick, | Russian, | Miner, | 30 | S. | Lytle, | Head and shoulder injured by blast through heading from adjoining breast. | |

| | | | | | | | | |
|-------|----|--|-------------------------------|-------------------------------|----------|------------|---------------------|---|
| April | 19 | Augusta Osuna, | Austrian, .. | Miner, | 26 | S. | Pine Hill, | Leg fractured by fall of slate that he was trying to pull down at face of breast. Hip and arm fractured. While attempting to close track lashed his arm in front of moving car the wheel caught by fall of coal while erecting set of timber on gangway. Ankle fractured by fall of coal while working at pillar. |
| May | 20 | George Kovash, Jr., .. | Hungarian, .. | Driver, | 24 | M. | Mount Hope, | Face and eyes injured. While drilling out charge of powder that had missed fire the day previous it exploded. |
| | 18 | Frank Bafonis, | Lithuanian, .. | Miner's laborer, .. | 32 | M. | Phoenix Park, | Leg crushed. While passing the top of car hoist inside, his foot slipped and he was caught between spokes of spiral wheel and a timber. |
| | 20 | John Cox, | American, .. | Miner, | 48 | M. | St. Clair, | Face and hands burned by explosion of gas. They fired blast at face of chute. In fifteen minutes they returned to face and ignited the gas. |
| | 31 | Richard Thomas, | American, .. | Miner, | 58 | M. | Otto, | Leg and arm fractured by fall of slate while loading car at pillar chute. Hip fractured by fall of slate at face of pillar. |
| June | 9 | George Ferns, | American, .. | Engineer, | 18 | S. | Buck Run, | Foot crushed by fall of coal in gangway while placing set of timber. |
| | 15 | { Enoch Zombowsky, { Anthony Suskavage, | Lithuanian, Lithuanian, .. | Miner, Miner's laborer, .. | 30 19 | M. S. } | { Otto, } | Face and hands burned by explosion of gas. After firing blast at face of breast he returned to face and ignited a match to have a smoke and ignite the gas. |
| July | 8 | Joseph Skeddich, | Slavonian, .. | Company man, .. | 29 | M. | Oak Hill, | Leg fractured. While starting Outside chute a piece rolled on him. |
| | 8 | Michael Bolich, | Austrian, .. | Miner, | 29 | M. | Howard, | Back fractured. While going in gangway with trip of cars some material fell from top and struck the male causing him to jump which threw the car from the track and the driver was thrown under the car. |
| | 20 | John Mitchell, | Slavonian, .. | Miner, | 32 | S. | Buck Run, | Hip fractured. While pushing cars with motor next the motor left the track and caught the frame of the Zemuski against the frame of the top. |
| | 4 | Peter Doviak, | Austrian, .. | Miner, | 37 | M. | Lytle, | Legs and arms fractured by fall of top coal while working at breast pillar. |
| Aug. | 4 | Michael Schwack, .. | Hungarian, .. | Laborer, | 48 | M. | Newcastle, | Back injured in attempting to jump on car that was ascending dirt plane. He missed his footing and fell beneath the car. Outside. |
| Sept. | 4 | Horace Sours, | American, .. | Driver, | 20 | S. | Otto, | Face and neck burned by explosion of gas. He went to face of chute with naked light and ignited the gas. |
| | 18 | Philip Zemenski, | Slavonian, .. | Company man, .. | 27 | M. | St. Clair, | |
| Oct. | 8 | Victor Marshall, | Lithuanian, .. | Miner, | 43 | M. | Oak Hill, | |
| | 21 | Joseph Marchok, | Hungarian, .. | Laborer, | 19 | S. | Mount Hope, | |
| | 21 | John Brida, | Austrian, .. | Miner, | 30 | M. | Wadesville, | |

Schuylkill.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Otto, Wadesville, Pine Knot, Phoenix Park, Glendower and John Veith Collieries.—Ventilation, roads, drainage and condition as to safety, good.

ST. CLAIR COAL COMPANY

St. Clair Colliery.—Ventilation, roads, drainage and condition as to safety, good.

LYTLE COAL COMPANY

Lytle Colliery.—Ventilation, roads, drainage and condition as to safety, good.

PINE HILL COAL COMPANY

Pine Hill Colliery.—Ventilation, roads, drainage and condition as to safety, good.

OAK HILL COAL COMPANY

Oak Hill Colliery.—Ventilation fair. Drainage bad. Roads and condition as to safety, good.

BUCK RUN COAL COMPANY

Buck Run Colliery.—Ventilation fair. Roads, drainage and condition as to safety, good.

DARKWATER COAL COMPANY

Newcastle Colliery.—Ventilation fair. Drainage bad. Roads and condition as to safety, good.

MT. HOPE COAL COMPANY

Mt. Hope Colliery.—Ventilation, roads and drainage, fair. Condition as to safety, good.

WHITE AND COMPANY

Howard Colliery.—Ventilation, good in No. 1 Slope, but only fair in other Slopes. Drainage bad. Roads and condition as to safety, good.

ELLSWORTH COAL COMPANY

Ellsworth Colliery.—Ventilation, roads, drainage and condition as to safety, good.

BUTCHER CREEK COAL COMPANY

Laurel Run Colliery.—Ventilation fair. Roads and drainage bad. Condition as to safety, good.

BLACK HEATH COAL COMPANY

Black Heath Colliery.—Ventilation, roads and drainage, fair. Condition as to safety, good.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Otto Colliery.—Completed Inside:—Haulage tunnel from Top Split vein to Primrose vein, 7th lift, shaft workings.

Air tunnel from Top Split vein to Primrose vein, 7th lift, shaft workings.

Haulage tunnel from Bottom Split vein to Top Split vein, 7th lift, shaft workings.

Air tunnel from Bottom Split vein to Middle Split vein, 5th lift, shaft workings.

Air tunnel from Bottom vein to Middle Split vein, 6th lift, shaft workings.

In Progress Inside:—Drainage tunnel from Bottom Split vein, 5th lift, shaft workings, to Middle Split vein, White Ash slope.

Opening new lift on White Ash slope at an elevation of 493 feet.

Completed Outside:—Installed 21-foot fan and engine at new air shaft at White Ash slope.

Wadessville Colliery.—The haulage tunnel driven south from the East Skidmore gangway, Beechwood water level drift to the Bottom Split of the Mammoth vein has been completed, and gangways have been turned east and west on the Top Split vein.

A 21-foot exhaust fan has been erected at the top of Beechwood shaft and is in operation.

The stripping of the Mammoth vein at Beechwood is in progress east of the team road to Newcastle for a distance of 1,200 feet.

The traveling-way from the No. 2 lift, Vulcan slope, to the surface, has been completed.

The Holmes slope is being continued to the 4th lift, No. 3 lift has been turned east.

The Holmes Seven Foot haulage tunnel, No. 2 lift, Holmes slope, is being sealed shut with a brick dam 8 feet thick.

Breast No. 73 East Top Split gangway, shaft level, is still in preparation for the installation of a self-acting plane.

The haulage tunnel driven south from the East Skidmore gangway, 1 lift, West Skidmore plane, to the Bottom Split vein, a distance of 105 yards, has been completed, and a curve has been turned east in the Bottom Split of the Mammoth vein.

The haulage tunnel, driven south from the East Seven Foot gangway, No. 1 lift, East Skidmore plane, to the Skidmore vein a distance of 43½ yards, has been completed, and a gangway turned east in the Skidmore vein.

A haulage tunnel is being driven south from the East Skidmore gangway, 1st lift, East Skidmore plane, to the Bottom Split of the Mammoth vein, estimated length 100 yards.

A haulage tunnel has been driven from the West Skidmore gangway No. 1 lift, East Skidmore plane, to the Bottom Split of the Mammoth vein, a distance of 123 yards, and a gangway has been turned west in the Mammoth vein.

A haulage tunnel has been driven from the West Skidmore gangway at No. 3 chute, No. 2 lift, West Skidmore plane, south to the Bottom

Split of the Mammoth vein, a distance of 134 yards. Gangways have been turned east and west in the Mammoth vein.

A rock airway has been driven from the West Skidmore monkey heading 1st lift, West Skidmore plane, at No. 30 chute, to the Bottom Split of the Mammoth vein, length of hole $31\frac{1}{2}$ yards.

A wing tunnel has been driven east from the Beechwood main tunnel, a distance of 13 yards, to the Bottom Split of the Mammoth vein.

A car pusher has been installed on the landing at the foot of the coal shaft.

A water level tunnel has been started from the surface to the Skidmore vein at the old Wadesville dam, estimated length 44 yards.

A haulage tunnel is being driven south from the West Skidmore gangway 2nd lift. West Skidmore plane, at No. 4 chute, to the Bottom Split of the Mammoth vein, estimated length 112 yards.

A haulage tunnel is being driven north from the West Seven Foot gangway, at No. 18 chute, Beechwood drift, to the Buck Mountain vein, estimated length 47 yards.

A haulage tunnel is being driven south from the West Seven Foot gangway to No. 18 chute, Beechwood drift, to the Skidmore vein, estimated length 33 yards.

Pine Knot Colliery.—Completed inside: Haulage tunnel 8 by 12 feet from East Middle Split, south dip, to Top Split, south dip, at Breast No. 9, second level, No. 2 shaft.

Air tunnel 7 by 8 feet from East Middle Split, south dip, to Top Split, south dip, at Breast No. 9 $\frac{1}{2}$, second level, No. 2 Shaft.

Haulage tunnel 8 by 12 feet from East Skidmore, south dip, to Bottom Split, south dip, at Breast No. 8, second level, No. 2 Shaft.

Air tunnel 7 by 8 feet from East Skidmore, south dip, to Bottom Split, south dip, at Breast No. 8 $\frac{1}{2}$, second level, No. 2 Shaft.

Electric haulage on first level No. 2 Shaft.

Electric lighting in inside hospitals and tunnels.

In Progress, Inside: Traveling-way in Skidmore vein No. 1 to No. 2 Shaft.

Completed Outside: Retail coal pockets and driveway to same.

Phoenix Park Colliery.—Completed Inside: Sinking No. 6 Tracy slope.

Sinking No. 1 underground slope, Diamond vein.

Driving tunnel from Tracy vein to Little Tracy vein, old No. 1 level, No. 6 Tracy slope.

Sinking No. 1 Plane at Breast No. 7, second lift, No. 2 underground slope, Diamond vein.

Sinking No. 2 plane at Breast No. 19, second lift, No. 2 underground slope, Diamond vein.

Sinking No. 3 plane at Breast No. 25, second lift, No. 2 underground slope, Diamond vein.

Hospital at Peach Mountain slope.

Completed Outside: Lamp house at No. 2 Tracy air shaft.

Glendower Colliery.—Completed Inside: Haulage tunnel from Bottom Split vein north to slope vein at Breast No. 25, second level, Basin slope.

Haulage tunnel 7 by 10 feet from West Skidmore to Buck Mountain vein at Breast No. 37, Glendower water level.

In Progress.—Inside: Basin slope, Top Split vein, West Glendower Colliery.

West third level Basin slope, Slope vein, West Glendower Colliery.

Completed Outside: Railroad to new Top Split slope, West Glendower.

Locomotive house at Taylorsville.

LYTLE COAL COMPANY

Lytle Colliery.—Outside: Installed fan on No. 2 air shaft, rebuilt Holmes vein fan, built brick safety lamp house, fireproof foreman's office and waiting room, and fireproof electric repair shop and storage house. Concreted top of No. 2 slope. Installed 2 Wilmot jigs for egg coal. Built 40 mine cars.

Inside: Fourth Level: Tapped water in Wadlingers Old Diamond workings. Drove 66 yards of air tunnel.

Fifth Level: Completed turnout and Head of No. 6 slope. Drove 85 yards of tunnel.

Sixth Level: Completed sixth level bottom at shaft. Drove pump house for new pump; also engine house for No. 7 slope. Installed electric hoist No. 7 slope. Drove turnouts and Head of No. 7 slope. Installed new electric locomotive. Drove 217 yards of tunnel; also 22 yards of air tunnel.

OAK HILL COAL COMPANY

Oak Hill Colliery.—Inside: New slope tunnel from Black Heath to Red Ash, 127 feet.

Third level tunnel from Skidmore to Black Heath, 112 feet.

Third level overhead tunnel from Skidmore to Black Heath, 59 feet.

Fourth level tunnel from Skidmore to White Ash, 210 feet.

Fourth level hospital.

New Slope tunnel from Black Heath to White Ash, 20 feet.

New pump house, fourth level, 34 feet long.

Fourth level overhead air tunnel from Skidmore to Black Heath, 40 feet.

Fifth level overhead air tunnel from Buck Mountain to Seven Foot, 110 feet.

New pump in fourth level, and concrete pump house.

Outside: Steam car pusher and steam dump at head of breaker.

BUCK RUN COAL COMPANY

Buck Run Colliery.—Inside: Two tunnels were driven from the Seven Foot vein on the south dip, to the Seven Foot vein on the north dip, on the third level. One of these tunnels was later on extended to the Buck Mountain vein on the north dip.

A tunnel was driven from the West Seven Foot, third level, north dip, to the Buck Mountain vein.

A tunnel was driven from the West Seven Foot, second level, north dip, north to the Daniels vein.

An electrically driven pump was installed on the third level. This pump has a capacity of 225 gallons per minute.

Outside: Eleven dwellings were erected and twelve more partly completed.

A fireproof building was erected about 75 feet east of the mouth of the Tender slope, which is being used as a lamp house, foreman's office and supply house.

A motor generator set of 150 K. W. capacity was installed.

DARKWATER COAL COMPANY

Newcastle Colliery.—Inside: A tunnel was driven on the second level from the Skidmore vein on the south dip to the Skidmore vein on the north dip.

Three tunnels were driven from the Skidmore vein to the Mammoth vein on the south dip.

Two air holes were driven on the Skidmore vein, south dip, from the third level to the surface.

A water level tunnel was driven from the surface near the office north of the Mammoth vein. This tunnel is now being extended to the Skidmore vein and will strike that vein on line with the Tender slope.

When it is finished it will afford a passageway for the inside water, and men will travel through it to go down the slope.

Outside: A fireproof brick generator house was almost completed.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in the Armory, Pottsville, May 18 and 19. The Board of Examiners was composed of the following: Michael J. Brennan, Inspector, Pottsville; James B. Neale, Superintendent, Buck Run; Timothy Brennan, Miner, Heckscherville; Henry Gottschall, Miner, Branchdale.

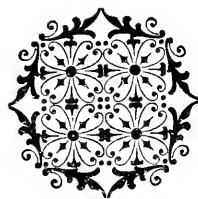
The following persons passed a satisfactory examination and were granted certificates:

MINE FOREMEN

John Cullen, Zerbe; Patrick Maley, Heckscherville; Thomas Grace, Glen Carbon; Frederick McHale, Owen Langton, William Gulliver, Minersville.

ASSISTANT MINE FOREMEN

Samuel E. Smith.



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TWENTIETH DISTRICT

SCHUYLKILL AND DAUPHIN COUNTIES

Lykens, Pa., February 19, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Twentieth Anthracite District, for the year ending December 31, 1915.

Respectfully submitted,

CHARLES J. PRICE,
Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 7 |
| Number of mines, | 26 |
| Number of mines in operation, | 23 |
| Number of tons of coal shipped to market, | 1,599,776 |
| Number of tons used at mines for steam and heat, | 415,257 |
| Number of tons sold to local trade and used by employes, | 40,567 |
| Number of tons produced, | 2,055,600 |
| Number of tons produced by compressed air machines, ..... | ..... |
| Number of tons produced by electrical machines, .... | ..... |
| Number of persons employed inside of mines, | 4,295 |
| Number of persons employed outside, | 1,541 |
| Number of fatal accidents inside of mines, | 13 |
| Number of fatal accidents outside, | 1 |
| Number of non-fatal accidents inside of mines, | 30 |
| Number of non-fatal accidents outside, | 8 |
| Number of tons of coal produced per fatal accident inside, | 158,123 |
| Number of tons produced per fatal accident outside, .. | 2,055,600 |
| Number of tons produced per fatal accident inside and outside, | 146,829 |
| Number of persons employed per fatal accident inside, | 330 |
| Number of persons employed per fatal accident outside, | 1,541 |
| Number of persons employed per fatal accident inside and outside, | 417 |
| Number of persons employed per non-fatal accident inside, | 143 |
| Number of persons employed per non-fatal accident outside, | 193 |
| Number of persons employed per non-fatal accident inside and outside, | 154 |
| Number of wives made widows, | 10 |
| Number of children made orphans, | 24 |
| Number of steam locomotives used inside of mines, .... | ..... |
| Number of steam locomotives used outside, | 20 |
| Number of compressed air locomotives used inside, | 3 |
| Number of compressed air locomotives used outside, ... | ..... |
| Number of electric motors used inside, | 22 |
| Number of electric motors used outside, | 5 |
| Number of gasoline locomotives used inside, | 2 |
| Number of fans in use, | 24 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 23 |
| Number of non-gaseous mines in operation, ..... | ..... |
| Number of new mines opened, ..... | ..... |
| Number of old mines abandoned, ..... | ..... |

TABLE A

PRODUCTION OF COAL

| Names of Operators | Tons |
|--|------------------|
| Philadelphia and Reading Coal and Iron Company,... | 1,033,467 |
| Susquehanna Coal Company, | 867,955 |
| Lehigh Valley Coal Company, | 154,178 |
| Total, | <u>2,055,600</u> |

Production by Counties

| | |
|-------------------|------------------|
| Schuylkill, | 1,187,645 |
| Dauphin, | 827,955 |
| Total, | <u>2,055,600</u> |

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|---|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| Philadelphia and Reading Coal and Iron Co., | 9 | 4 | 10 | 16 | 3 | 19 | 114,836 | 64,592 | 2,211 | 659 | 2,870 | 246 | 659 | 138 | 220 |
| Shenandoah Coal Co., | 3 | ..... | 3 | 11 | 4 | 15 | 289,318 | 78,905 | 1,716 | 770 | 2,486 | 572 | ..... | 136 | 192 |
| Lehigh Valley Coal Co., | 1 | ..... | 1 | 3 | 1 | 4 | 154,178 | 51,203 | 368 | 112 | 480 | 308 | ..... | 123 | 112 |
| Totals and averages, | 13 | 1 | 14 | 30 | 8 | 38 | 158,123 | 68,529 | 4,295 | 1,541 | 5,836 | 330 | 1,541 | 142 | 193 |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|---|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | ..... | ..... | ..... | ..... | ..... | 2 | 15.38 |
| Falls of slate, ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 15.38 |
| Falls of roof, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3.08 |
| Mine cars, ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | 23.08 |
| Struck by rock, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 7.69 |
| Rush of coal, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 7.69 |
| Cause unknown, ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 7.69 |
| Totals, | 1 | 1 | ..... | 1 | 1 | 2 | 2 | ..... | ..... | ..... | ..... | 3 | 13 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 100.00 |
| Totals, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 | 100.00 |
| Grand totals inside and outside, | 1 | 2 | ..... | 1 | 2 | 2 | 2 | ..... | ..... | ..... | ..... | 4 | 14 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of coal, | | | | | | 1 | 1 | | | | | 1 | 3 | 10.00 |
| Falls of slate, | 1 | | 1 | 1 | | 1 | 1 | | | | | | 5 | 16.67 |
| Mine cars, | 1 | 1 | | | | | | | 3 | 2 | 1 | 1 | 9 | 30.00 |
| Explosions of gas, | | | | 1 | | | 1 | 1 | | | | 1 | 4 | 13.33 |
| Blasts, premature and otherwise, | | | | | | | | | 1 | | | | 1 | 3.34 |
| Falling down breasts, | | | | 1 | | | | | | | | | 1 | 3.33 |
| Explosions of carbide, | | | | | | | | | 1 | | | | 1 | 3.34 |
| Rock rolled on him, | | | | | | | | 1 | | | | | 1 | 3.33 |
| Struck by iron pipe, | | | | | | | | | 1 | | | | 1 | 3.33 |
| Struck by cage, | | | | | | | | 1 | | | | | 1 | 3.33 |
| Struck by timber, | 2 | | | | | | | | | | | | 2 | 6.67 |
| Falling, | | | | | | | | | | | 1 | | 1 | 3.33 |
| Totals, | 4 | 1 | 1 | 3 | | 2 | 3 | 4 | 5 | 2 | 2 | 3 | 30 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Cars, | | | | | | | | | | | 1 | | 1 | 12.50 |
| Machinery, | | | | | | 1 | | | | | | | 1 | 12.50 |
| Thrown off mule, | | | | | 1 | | | | | | | | 1 | 12.50 |
| Rush of culm, | | 1 | | | | | | | | | | | 1 | 12.50 |
| Bags of cement fell on him, | | | | | | | | | | | | | | |
| Struck by lever, | | | | 1 | | | | | | | | | 1 | 12.50 |
| Struck by block of wood, | | | | | | | | | | | 1 | | 1 | 12.50 |
| Struck by coil of wire rope, | | | | | | | | 1 | | | | | 1 | 12.50 |
| Totals, | | 1 | | 1 | 1 | 1 | | 1 | | 1 | 2 | | 8 | 100.00 |
| Grand totals inside and outside, | 4 | 2 | 1 | 4 | 1 | 3 | 3 | 5 | 5 | 3 | 4 | 3 | 38 | ..... |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-----------------|--------|----------|----------|---------|-----------|--------|------|------|-----|-------|-------|----------|
| | Totals | December | November | October | September | August | July | June | May | April | March | February |
| American, | 14 | 4 | ..... | ..... | ..... | ..... | 2 | 2 | 2 | 1 | ..... | 1 |
| Totals, | 14 | 4 | ..... | ..... | ..... | ..... | 2 | 2 | 2 | 1 | ..... | 1 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|--------|----------|----------|---------|-----------|--------|-------|-------|-------|-------|-------|----------|
| | Totals | December | November | October | September | August | July | June | May | April | March | February |
| American, | 25 | 2 | 2 | 2 | 2 | 4 | 1 | 2 | ..... | 3 | 1 | 1 |
| Irish, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 |
| Polish, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Lithuanian, | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Austrian, | 6 | ..... | 1 | ..... | 1 | 1 | 1 | 1 | ..... | ..... | ..... | 1 |
| Russian, | 4 | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | 1 | 1 | ..... |
| Totals, | 38 | 2 | 4 | 3 | 5 | 5 | 3 | 3 | 1 | 4 | 1 | 4 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|--|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|---------------|-----------------|----------------------------------|---|--|--|-----------------------------------|
| Philadelphia and Reading Coal and Iron Co. | | | | | | | | | | | | | | | |
| Lincoln Colliery: | | | | | | | | | | | | | | | |
| Lincoln No. 1, | Slope, | Gaseous, .. | Fan, | 21 | 7 | 6 | 85 | 2 | Guibal, | Steam, | 39 | 250,000 | 250,000 | 259,000 | 917 |
| Lincoln No. 2, | Slope, | Gaseous, .. | Fan, | 18 | 6 | 5.3 | 80 | 2 | Guibal, | Steam, | | | | | |
| Lincoln No. 2, Vein Trial | Slope, | Gaseous, .. | Fan, | 12 | 4 | 4 | 80 | 7 | Guibal, | Electricity, .. | | | | | |
| Lincoln Water Shaft, | Shaft, | Gaseous, .. | Fan, | 19 | 7 | 6 | 90 | 2.4 | Guibal, | Steam, | | | | | |
| Brookside Colliery: | | | | | | | | | | | | | | | |
| Brookside No. 1, | Slope, | Gaseous, .. | Fan, | 18 | 6 | 5 | 85 | 1.8 | Guibal, | Steam, | 23 | 203,000 | 203,000 | 210,000 | 749 |
| Brookside No. 4, | Slope, | Gaseous, .. | Fan, | 18 | 6 | 5 | 85 | 1.1 | | Steam, | | | | | |
| Brookside, East, | Shaft, | Gaseous, .. | Fan, | 21 | 7 | 6 | 85 | 2 | | Electricity, .. | | | | | |
| Brookside, Tender, | Slope, | Gaseous, .. | Fan, | 14 | 4 | 5 | 86 | 1.2 | | | | | | | |
| Good Spring Colliery: | | | | | | | | | | | | | | | |
| Good Spring No. 1, | Slope, | Gaseous, .. | Fan, | 18 | 6 | 5 | 80 | 1.1 | Guibal, | Steam, | 19 | 172,500 | 172,500 | 175,300 | 545 |
| Good Spring, Tender, | Slope, | Gaseous, .. | Fan, | 18 | 6 | 5 | 80 | .8 | | Steam, | | | | | |
| Good Spring No. 3, | Slope, | Gaseous, .. | Fans, | { 18 15 | 6 4.5 | 5 5 | 95 95 | 1.1 1.1 | | | | | | | |
| Valley View Colliery: | | | | | | | | | | | | | | | |
| Valley View No. 1, | Tunnel, .. | Gaseous, .. | Fan, | 12 | 4 | 4 | * | .... | Guibal, | Steam, | | | | | |
| Valley View No. 2, | Drift, | Non-gas, .. | Natural, .. | .... | .... | .... | * | .... |  |  |  |  |  |  |  |
| Valley View No. 3, | Drift, | Non-gas, .. | Natural, .. | .... | .... | .... | * | .... |  |  |  |  |  |  |  |

*Idle.

[illegible]

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employes | Total production of coal in tons | Number of days worked | Number of employes | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | | Number of horses and mules |
|--|---------------------|--|--|---|----------------------------------|-----------------------|--------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|-------|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | | |
| Philadelphia and Reading Coal and Iron Co. | { Schuylkill, ... } | 335,763 | 80,694 | 7,318 | 423,775 | 211 | 1,114 | 3 | 7 | 50,285 | 89,782 | 8,913 | 102 | |
| Lincoln | | 248,854 | 38,569 | 63 | 287,466 | 220 | 953 | 6 | 10 | 8,725 | 87,992 | 2,000 | 88 | |
| Brookside | | 139,544 | 39,335 | 7,604 | 266,483 | 216 | 712 | 1 | 2 | ..... | 135,945 | 25,425 | 81 | |
| Good Spring | | | | 183 | 183 | | 2 | | | | | | | |
| Valley View | | 784,141 | 178,598 | 15,168 | 977,907 | ..... | 2,781 | 10 | 19 | 59,550 | 313,690 | 36,338 | 271 | |
| Washeries | { Schuylkill, ... } | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |
| Middle Creek | | 48,991 | 6,569 | ..... | 55,560 | 98 | 86 | ..... | ..... | ..... | 275 | ..... | ..... |  |
| Rausch Creek | 48,991 | 6,569 | ..... | 55,560 | 98 | 89 | ..... | ..... | ..... | ..... | 277 | ..... | ..... |  |
| Totals | ..... | 833,132 | 185,167 | 15,168 | 1,033,467 | ..... | 2,870 | 10 | 19 | 59,550 | 313,967 | 36,338 | 271 | |
| Susquehanna Coal Co. | { Dauphin, ... } | 282,540 | 50,789 | 7,979 | 351,268 | 223 | 1,168 | ..... | 10 | 10,250 | 89,200 | 118,625 | 91 | |
| Williamstown | | 217,161 | 50,756 | 15,423 | 283,340 | 206 | 1,251 | 3 | 5 | 55,825 | 67,765 | 5,694 | 106 | |
| Short Mountain | | 509,701 | 101,545 | 23,362 | 634,608 | ..... | 2,419 | 3 | 15 | 66,075 | 156,955 | 124,319 | 197 | |

TABLE 2.—Continued

| Names of Operators and Collieries | County | Number of horses and mules | | | | | | | | | | Explosives | | | Number of non-fatal accidents | | | Number of fatal accidents | | | Number of employees | | | Number of days worked | | | Total production of coal in tons | | | Number of tons sold to local trade and used by employees | | | Number of tons used at collieries for steam and heat | | | Number of tons of coal shipped to market | | | | | | | | | | | | | | |
|-----------------------------------|--------------------|----------------------------|--|--|--|--|--|--|--|--|--|---|--|--|-----------------------------------|--|--|---------------------------------|--|--|---------------------|--|--|-----------------------|--|--|----------------------------------|--|--|--|--|--|--|--|--|--|--|--|---------|--|--|-----------|--|--|-------|--|--|-------|--|--|
| | | | | | | | | | | | | Number of pounds of permissible explosives used | | | Number of pounds of dynamite used | | | Number of pounds of powder used | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Williamstown, | } Dauphin, } | Washeries | | | | | | | | | | | | | | | | | | | 37 | | | | | | 598 | | | 148,165 | | | 1,116 | | | 82,589 | | | 61,409 | | | | | | | | | | | |
| Short Mountain, | | | | | | | | | | | | | | | | | | | | | 50 | | | | | | 511 | | | 83,242 | | | | | | | | | 56,400 | | | | | | | | | | | |
| Totals, | | | | | | | | | | | | | | | | | | 67 | | | | | | | | | | | | 233,347 | | | | | | | | | 111,431 | | | | | | | | | | | |
| Lehigh Valley Coal Co. | Schuylkill, | | | | | | | | | | | | | | | | | 15 | | | | | | 2,486 | | | | | | 867,955 | | | | | | | | | 212,976 | | | 630,501 | | | | | | | | |
| Blackwood, | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 156,985 | | | | | | | | | 17,114 | | | 136,143 | | | | | | | | |
| Grand totals, | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 124,319 | | | | | | | | | 413,257 | | | 1,599,776 | | | | | | | | |
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TABLE 5.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | | | Locomotives | | | | Number of steam engines of all classes | | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors |
|---|-------------------|-------------------|-------------|---------|-------------|-------------------|-------------|-------|-------|----------|--|--------|-------------------|---|--------------------------------|--|----------------------------|---------------------------|
| | | Cylindrical | Horse power | Tubular | Horse power | Total horse power | Gasoline | Steam | Air | Electric | | | | | | | | |
| Philadelphia and Reading Coal and Iron Co., | Schuylkill, ..... | ..... | ..... | 72 | 9,000 | 9,000 | ..... | 10 | 3 | 10 | 125 | 23,037 | 9 | 18,988 | 5,925 | 4 | 7 | ..... |
| Susquehanna Coal Co., | Dauphin, | 4 | 650 | 92 | 11,175 | 11,825 | ..... | 7 | ..... | 11 | 1.8 | 14,640 | 9 | 14,680 | 5,357 | 5 | 7 | ..... |
| Lehigh Valley Coal Co., | Schuylkill, ..... | ..... | ..... | 10 | 1,500 | 1,500 | 2 | ..... | ..... | 6 | 11 | 2,560 | 1 | 200 | 210 | 1 | ..... | 16 |
| Totals, ..... | ..... | 4 | 650 | 174 | 21,675 | 22,325 | 2 | 20 | 3 | 27 | 274 | 40,207 | 19 | 33,928 | 11,492 | 10 | ..... | ..... |

TABLE 3.—Number of each class of employees inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | Outside | | | | | | | | Grand total | | |
|---|------------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|--------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|------------------------|--------------------|---------------|-------|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employes | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | Bookkeepers and clerks | All other employes | Total outside | |
| Philadelphia and Reading Coal and Iron Co., | Schuylkill, | 7 | 55 | .... | 711 | 330 | 137 | 41 | 4 | 291 | 635 | 2,211 | .... | 10 | 27 | 132 | 23 | 12 | 13 | 442 | 659 | 2,870 |
| Susquehanna Coal Co., | Dauphin, | 3 | 9 | 31 | 553 | 117 | 112 | 16 | 38 | 4 | 833 | 1,716 | 2 | 4 | 59 | 158 | 79 | 6 | 12 | 450 | 770 | 2,486 |
| Lehigh Valley Coal Co., | Schuylkill, ... | 2 | 9 | .... | 216 | 42 | 6 | 2 | .... | 37 | 48 | 368 | .... | 1 | 10 | 17 | 5 | 1 | 3 | 75 | 112 | 480 |
| Totals, ..... | ..... | 12 | 73 | 31 | 1,480 | 489 | 255 | 63 | 44 | 332 | 1,516 | 4,295 | 2 | 15 | 96 | 307 | 107 | 19 | 23 | 967 | 1,541 | 5,836 |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|------------------------|--------------|--------------------|-----|-------------------|------------------|-------------------|--------------------|-----------------|--|
| Jan. 13 | Enmanuel Peters, | American, .. | Miner, | 40 | M. | 1 | 4 | Short Mountain, | Dauphin, | Instantly killed while trying to start coal in draw hole. A large piece of rock swept down the pitch, striking the battery and breaking the prop above him and his head was caught between the rock and a drill. |
| Feb. 9 | Christian Long, | American, .. | Miner, | 48 | M. | 1 | 4 | { Lincoln, | Schuylkill, ... | Instantly killed by fall of roof while robbing a prop hole near face of breast gangway. |
| April 26 | Harry U. Minnig, | American, .. | Miner, | 25 | M. | 1 | 4 | { Brookside, | Schuylkill, ... | Instantly killed by fall of slate while sinking a prop hole near face of breast gangway. |
| May 6 | Harry Reimer, | American, .. | Miner, | 41 | M. | 1 | .... | Good Spring | Schuylkill, ... | Fatally injured by falling under cars on gangway. |
| May 24 | Harry Seymour, | American, .. | Driver, | 24 | S. | .... | .... | Brookside, | Schuylkill, ... | Instantly killed by rush of coal in man-way. |
| June 7 | Harry Wagner, | American, .. | Miner, | 40 | W. | .... | 2 | Brookside, | Schuylkill, ... | Found dead in sump at foot of shaft. The colliery was idle and he was sent down the shaft to run the pump. When he did not come up at 4 P. M. they went to look for him and found him dead. |
| June 4 | William H. Woods, ... | American, .. | Assistant foreman. | 37 | M. | 1 | 3 | Blackwood, | Schuylkill, ... | Instantly killed by fall of coal at face of gangway. |
| July 17 | George W. Foster, ... | American, .. | Miner, | 43 | S. | .... | .... | Short Mountain, | Dauphin, | Instantly killed by fall of coal while robbing pillars. |
| July 16 | Elmer E. Wagner, ... | American, .. | Miner, | 29 | M. | 1 | 3 | { Lincoln, | Schuylkill, ... | Instantly killed by being squeezed between car and timber on gangway. |
| July 31 | Solomon Zerby, | American, .. | Laborer, | 26 | M. | 1 | 1 | Brookside, | Schuylkill, ... | Fatally injured by fall of slate at face of gangway. |
| Dec. 9 | George Grell, | American, .. | Laborer, | 49 | M. | 1 | 3 | Short Mountain, | Dauphin, | Instantly killed by fall of roof near face of gangway. |
| Dec. 15 | Oscar Bettinger, | American, .. | Miner, | 33 | M. | 1 | .... | Brookside, | Schuylkill, ... | Fatally injured by being caught by cars. |
| Dec. 16 | Frank Crabb, | American, .. | Dumpman, ... | 24 | S. | .... | .... | Brookside, | Schuylkill, ... | Fatally injured by being caught by cars at foot of shaft. |
| Dec. 21 | John Tschubb, | American, .. | Runner, | 61 | M. | 1 | .... | Brookside, | Schuylkill, ... | |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|-------------------------|----------------|---------------|-----|-------------------|-----------------------|-----------------|---|
| Jan. 11 | Robert Deltrich, | American, .. | Laborer, .. | 33 | M. | Good Spring, | Schuylkill, ... | Arm broken by collar falling on him while timbering gangway. |
| 28 | Joseph Kopko, | Austrian, .. | Laborer, .. | 30 | M. | Brookside, | Schuylkill, ... | Legs badly bruised by locomotive on gangway. |
| 29 | Thomas Fleming, | Irish, | Miner, | 29 | S. | Blackwood, | Schuylkill, ... | Thumb severed by fall of slate at face of breast. |
| Feb. 4 | George Wagner, | Lithuanian, .. | Repairman, .. | 37 | M. | Brookside, | Schuylkill, ... | Toes crushed by timber falling on him on cars on gangway. |
| 12 | John Golc, | American, .. | Laborer, .. | 19 | S. | Brookside, | Schuylkill, ... | Collar bone split by being caught between legs on gangway. |
| March 29 | George Batdorf, | Russian, ... | Laborer, .. | 30 | S. | Short Mountain, | Dauphin, | Legs broken by rush of frozen culm. Out-arm fractured by fall of slate in airway. |
| April 6 | Robert Price, | American, .. | Repairman, .. | 46 | S. | Lincoln, | Schuylkill, ... | Face and hands burned by explosion of gas at face of breast. |
| 19 | Mike Lopsky, | American, .. | Fire boss, .. | 35 | M. | Brookside, | Schuylkill, ... | Leg broken by bags of cement falling on him. Outside. |
| 26 | Oliver Reiner, | Russian, ... | Laborer, .. | 45 | M. | Short Mountain, | Dauphin, | Arm fractured and leg injured by fall of slate near face of breast. |
| May 5 | Dennis McAuliffe, | American, .. | Miner, | 21 | M. | Brookside, | Schuylkill, ... | Two ribs broken by falling down breast. |
| June 2 | John Kopas, | Polish, | Driver, | 53 | M. | Williamstown, | Dauphin, | Nose broken and head injured by being thrown on a mine. Outside. |
| 17 | Michael Tomoskey, | Austrian, .. | Laborer, .. | 18 | S. | Blackwood, | Schuylkill, ... | Chest on end of slate in airway. |
| 22 | Joseph Kinsey, | Austrian, .. | Laborer, .. | 39 | M. | Williamstown, | Dauphin, | Back and groin injured by fall of slate at face of breast. |
| July 20 | Harry H. Finton, | American, .. | Miner, | 29 | S. | Williamstown, | Dauphin, | Fingers crushed by being caught in gears of machinery. Outside. |
| 26 | Andrew Lutkas, | American, .. | Machinist, .. | 19 | S. | Short Mountain, | Dauphin, | Contusion of pelvis and ankle sprained by fall of coal at face of breast. |
| 27 | John C. Wolfe, | Russian, ... | Miner, | 32 | M. | Williamstown, | Dauphin, | Pelvis fractured by fall of slate while robbing pillars. |
| Aug. 9 | Louis Markovich, | American, .. | Miner, | 33 | M. | Lincoln, | Schuylkill, ... | Thigh fractured by explosion of gas in head on him alongside of chute. |
| | Lott Furman, | Austrian, .. | Laborer, .. | 35 | S. | Williamstown, | Dauphin, | |
| | | American, .. | Laborer, .. | 22 | S. | Lincoln, | Schuylkill, ... | |

TABLE 5. — Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|-------|----------------------------|--------------|-------------------|-----|-------------------|-----------------------|-----------------|--|
| Aug. | 20 Mert Underkoffler, | American, .. | Laborer, | 18 | S. | Williamstown, | Dauphin, | Compound fracture of leg. Struck by a coil of wire rope. Outside. |
| | 21 Angelo Swartz, | Austrian, .. | Laborer, | 22 | S. | Blackwood, | Schuylkill, ... | Hip dislocated by being struck by a descending cage at foot of shaft. |
| | 25 Alex Frew, | American, .. | Pipeman, | 31 | M. | Williamstown, | Dauphin, | Rib broken by being caught by iron pipe on gangway. |
| | Walter Messner, | American, .. | Leather, | 19 | S. | Short Mountain, | Dauphin, | Hands severely burned by explosion of gas in chute. |
| Sept. | 1 Daniel Newcomer, | American, .. | Laborer, | 17 | S. | Lincoln, | Schuylkill, ... | Hand crushed by car at top of inside slope. Badly burned by explosion of carbide while preparing a charge of dynamite. |
| | 15 Victor Horley, | American, .. | Miner, | 49 | M. | Brookside, | Schuylkill, ... | Hands, head and eyes injured by explosion of blast in tunnel. |
| | 18 John Schucora, | Russian, ... | Laborer, | 33 | M. | Blackwood, | Schuylkill, ... | Arm broken by being caught by cars on gangway. |
| | 21 John Kolodrian, | Austrian, .. | Laborer, | 31 | M. | Williamstown, | Dauphin, | Leg fractured by tip of cars on gangway. |
| Oct. | 28 Frank Lutz, | American, .. | Blacksmith, | 67 | S. | Lincoln, | Schuylkill, ... | Leg fractured by being caught by car on gangway. |
| | 6 Roy Kessler, | American, .. | Loader, | 15 | S. | Brookside, | Schuylkill, ... | Ribs fractured by a large block of wood falling on him. Outside. |
| | 7 Simon Neberling, | American, .. | Laborer, | 55 | M. | Brookside, | Schuylkill, ... | Knee injured by being caught between cars at bottom of shaft. |
| | 23 John Tschubb, | American, .. | Runner, | 60 | M. | Brookside, | Schuylkill, ... | Compound fracture of leg by falling under car. Outside. |
| Nov. | 11 James Krammas, | American, .. | Miner, | 62 | M. | Lincoln, | Schuylkill, ... | Finger cut off by lever falling on him. Outside. |
| | 13 Samuel Ditzler, | American, .. | Laborer, | 18 | S. | Lincoln, | Schuylkill, ... | Rib fractured, hip partially dislocated and knee injured by falling under car on gangway. |
| | 27 Joseph Murdock, | Austrian, .. | Repairman, | 26 | M. | Brookside, | Schuylkill, ... | Toe crushed by car running over it on top of inside slope. |
| | Martin Doyle, Jr., ... | American, .. | Driver, | 18 | S. | Williamstown, | Dauphin, | Severely burned by explosion of gas on gangway. |
| Dec. | 7 Mark Bond, | American, .. | Driver, | 20 | S. | Williamstown, | Dauphin, | Back severely injured by fall of coal at face of breast. |
| | 22 George S. Harmon, ... | American, .. | Miner, | 29 | W. | Short Mountain, | Dauphin, | |
| | 24 Elmer Clauser, | American, .. | Miner, | 27 | M. | Good Spring, | Schuylkill, ... | |

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Lincoln, Brookside and Good Spring Collieries.—Ventilation, drainage and condition as to safety, good.

SUSQUEHANNA COAL COMPANY

Williamstown and Short Mountain Collieries.—Ventilation and condition as to safety, good. Drainage, fair.

LEHIGH VALLEY COAL COMPANY

Blackwood Colliery.—Ventilation, drainage and condition as to safety, good.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Lincoln Colliery.—Kalmia No. 2 vein slope west of colliery has been reopened to first lift and is being extended below this level, having reached a distance of 430 feet.

A culm plane 260 feet north of Kalmia No. 2 vein slope has been completed.

A mine track connecting Kalmia No. 2 vein slope and culm plane with mine track running to No. 2 vein trial slope has been completed.

Electric haulage has been extended from line running to No. 2 vein trial slope to top of Kalmia No. 2 vein slope and culm plane.

A tunnel is being driven through the fault at No. 1 slope, seventh lift, east No. 2 vein gangway and has reached a distance of 115 feet.

Electric haulage has been extended on the west No. 4 vein, sixth lift gangway, to breast No. 128.

Brookside Colliery, East Section.—The installation of the high stage compressed air plant has been completed and this method of haulage is now being used on the third lift between the shaft and No. 54 tunnel on the east side; also on the fifth lift between the shaft and No. 4 plane.

A tunnel has been driven on fifth lift from the No. 6 vein gangway at No. 8 chute to the No. 5 vein gangway, a distance of 55 feet.

An air tunnel has been driven on fifth lift on the level of the main heading from the No. 6 vein at No. 4 chute to the No. 5 vein connecting with the old air tunnel from No. 5 to No. 4 vein tunnel, a distance of 54 feet.

An air tunnel has been driven on fifth lift on the level of the main heading from the No. 6 vein at No. 9 chute to the No. 5 vein, a distance of 42 feet.

A tunnel is being driven on fourth lift of Tender slope from the No. 4 vein to shaft and has reached a distance of 284 feet.

West Section.—The No. 1 tunnel, No. 4 basin slope, west third lift, has been extended from Leader to No. 4 vein, a distance of 116 feet.

Good Spring Colliery.—A tunnel has been driven at No. 1 slope, third lift, from West Bottom Bench gangway at Breast No. 75 to Orchard vein, a distance of 651 feet.

A back-switch tunnel has been driven on fourth lift at bottom of Tender slope, a distance of 52 feet.

A tunnel has been driven at No. 1 slope, second lift, from East Holmes gangway, at Breast No. 82 to Orchard vein, a distance of 283 feet.

A fresh water reservoir 35 feet by 60 feet by 8 feet deep has been built north of No. 1 slope.

SUSQUEHANNA COAL COMPANY

Williamstown Colliery.—Installed a new locomotive and built a new washhouse and a new motor house at Big Lick.

The following tunnels were driven: East Lykens vein to East Little vein No. 2 shaft; Little vein to Red Shale No. 2 shaft; Big Lick slope to White Ash measures; No. 11 vein to No. 9 vein South tunnel, No. 1 shaft; No. 7 vein to No. 11 vein, in No. 1 shaft; rock plane south to No. 9 vein, No. 2 shaft counter; No. 9 vein to No. 7 vein, Bear Valley slope No. 2 lift. Airway from White Ash to Big Lick slope; air tunnel from White's vein airway to White Ash Big Lick slope; air shaft is being sunk at Bear Valley. Installed a new pump at No. 1 shaft.

Short Mountain Colliery.—Tunnels were driven as follows: Little vein West Bottom Bear Gap slope; No. 4 level White's vein west No. 4 slope; Top Basin slope; Bear Gap slope No. 5 level, Big vein No. 4 slope; White's vein west No. 5 level; White Ash slope; White's vein east No. 1 level; White's vein to Big vein, north dip, No. 7 level.

The following tunnels were driven to No. 1 shaft: No. 5 counter No. 4 slope; No. 4 slope No. 5 level; No. 4 slope No. 2 level; White's vein No. 4 slope; No. 4 slope No. 3 level; No. 2 gate; Old No. 1, No. 1 level. These tunnels are supported with structural steel at the shaft openings.

The following airways were driven: White's vein east No. 1 level; White's vein east No. 5 level; Big vein West Bear Gap slope; White's vein east No. 3 level; White's vein west No. 1 level.

Sunk east side air slope and erected fan. Sunk west side air shaft and erected fan. Airway driven, Bear Gap trial slope. Sunk basin slope, White's vein No. 4 slope; trial slope White Ash. Plane driven Bear Gap slope. Erected steel head frame, hoisting engines, brick engine house and steam lines at No. 1 shaft.

LEHIGH VALLEY COAL COMPANY

Blackwood Colliery.—Drove 109 feet of tunnel north from Little Orchard vein in tunnel, being driven to Little Diamond vein in Blackwood tunnel.

Drove 161 feet to completion in tunnel from Tracy to Skidmore vein on east side of Blackwood tunnel.

Drove 98 feet to completion in tunnel from Primrose to Buck Mountain vein in Blackwood tunnel.

Turnout at second level driven 48 feet east to a total distance of 78 feet, and west 294 feet to a total distance of 345 feet to main second level tunnel. Main second level tunnel driven 154 feet north and 96 feet south from this intersection. Tunnel driven from a point 78 feet east of shaft in a southwesterly direction a distance of 540 feet to main second level tunnel. Main second level tunnel driven north from this intersection a distance of 80 feet and south 415 feet to connect with Tracy gangway at foot of Tracy slope.

Installed a water spray system for fire protection on west side of breaker, and rock chute and conveyor line for the more economical handling of mine rock and breaker refuse.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in Lykens, May 18, 19 and 20. The Board of Examiners was composed of Charles J. Price, Mine Inspector; William Auman, Superintendent, Lykens; Samuel Evans, Miner, Minersville; and O. G. Zigler, Miner, Lykens.

The following persons passed a satisfactory examination and were granted certificates:

MINE FOREMEN

Harry A. Miller, John A. Wolf, John Dyer, Stephen Morgan, Thomas Bowen, Williamstown; William H. King, Tower City.

ASSISTANT MINE FOREMAN

Arthur C. Campbell, Harry J. Frantz, Daniel F. Stinner, John J. Murray, Jeremiah E. Buggy, William A. Mullen, Harper A. Yoder, Williamstown; Dennis M. Cavanagh, Clinton E. Klinger, Wiconisco; William E. Workman, Peoples.



TWENTY-FIRST DISTRICT

LACKAWANNA, SUSQUEHANNA, SULLIVAN AND WAYNE COUNTIES

Forest City, Pa., February 15, 1916.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines of the Twenty-first Anthracite District for the year ending December 31, 1915.

Respectfully submitted,

BENJAMIN MAXEY,

Inspector.

SUMMARY OF STATISTICS

| | |
|---|-----------|
| Number of collieries, | 16 |
| Number of mines, | 37 |
| Number of mines in operation, | 37 |
| Number of tons of coal shipped to market, | 2,681,323 |
| Number of tons used at mines for steam and heat, | 269,878 |
| Number of tons sold to local trade and used by employes, | 55,426 |
| Number of tons produced, | 3,006,627 |
| Number of tons produced by compressed air machines, ..... | ..... |
| Number of tons produced by electrical machines, ..... | ..... |
| Number of persons employed inside of mines, | 5,022 |
| Number of persons employed outside, | 1,951 |
| Number of fatal accidents inside of mines, | 21 |
| Number of fatal accidents outside, | 1 |
| Number of non-fatal accidents inside of mines, | 39 |
| Number of non-fatal accidents outside, | 7 |
| Number of tons of coal produced per fatal accident inside, | 143,173 |
| Number of tons produced per fatal accident outside, ... | 3,006,627 |
| Number of tons produced per fatal accident inside and outside, | 136,665 |
| Number of persons employed per fatal accident inside, .. | 239 |
| Number of persons employed per fatal accident outside, .. | 1,951 |
| Number of persons employed per fatal accident inside and outside, | 317 |
| Number of persons employed per non-fatal accident inside, | 129 |
| Number of persons employed per non-fatal accident outside, | 279 |
| Number of persons employed per non-fatal accident inside and outside, | 152 |
| Number of wives made widows, | 11 |
| Number of children made orphans, | 28 |
| Number of steam locomotives used inside of mines, ... | 3 |
| Number of steam locomotives used outside, | 29 |
| Number of compressed air locomotives used inside, .... | ..... |
| Number of compressed air locomotives used outside, .. | ..... |
| Number of electric motors used inside, | 49 |
| Number of electric motors used outside, | 1 |
| Number of gasoline locomotives used inside, | 4 |
| Number of fans in use, | 29 |
| Number of furnaces in use, ..... | ..... |
| Number of gaseous mines in operation, | 4 |
| Number of non-gaseous mines in operation, | 33 |
| Number of new mines opened, ..... | ..... |
| Number of old mines abandoned, ..... | ..... |

TABLE A.

PRODUCTION OF COAL

| Names of Operators | Tons |
|--|-------------------------|
| Hillside Coal and Iron Company, | 583,729 |
| Delaware and Hudson Company, | 524,509 |
| Scranton Coal Company, | 394,278 |
| Connell Anthracite Mining Company, | 312,428 |
| Lackawanna Coal Company, Limited, | 308,502 |
| Moosic Mountain Coal Company, | 224,777 |
| Mt. Jessup Coal Company, Limited, | 204,814 |
| Northern Anthracite Coal Company, | 163,651 |
| Temple Coal Company, | 92,470 |
| O'Boyle-Foy Anthracite Coal Company, | 62,185 |
| Dolph Coal Company, Limited, | 54,592 |
| Sacandaga Coal Company, | 36,669 |
| Carbondale Coal Mining Company, | 33,691 |
| Clinton Falls Coal Company, | 8,995 |
| Wachna-Taylor Anthracite Coal Company, | 1,337 |
| Total, | <u><u>3,006,627</u></u> |

Production by Counties

| | |
|--------------------|-------------------------|
| Lackawanna, | 1,694,392 |
| Susquehanna, | 678,639 |
| Sullivan, | 539,601 |
| Wayne, | 93,995 |
| Total, | <u><u>3,006,627</u></u> |

TABLE B.—Fatal and non-fatal accidents inside and outside of mine; number of tons of coal produced per accident; number of persons employed; number employed per accident

| Names of Operators | Fatal Accidents | | | Non-Fatal Accidents | | | Tons of coal produced per fatal accident inside | Tons of coal produced per non-fatal accident inside | Number of employees inside | Number of employees outside | Total number of employees | Number of employees inside per fatal accident | Number of employees outside per fatal accident | Number of employees inside per non-fatal accident | Number of employees outside per non-fatal accident |
|----------------------------------|-----------------|---------|-------|---------------------|---------|-------|---|---|----------------------------|-----------------------------|---------------------------|---|--|---|--|
| | Inside | Outside | Total | Inside | Outside | Total | | | | | | | | | |
| Hillside Coal and Iron Co., | 4 | | 4 | 9 | 1 | 1 | 145,922 | 58,279 | 1,110 | 285 | 1,395 | 278 | | 67 | 285 |
| Delaware and Hudson Co., | 4 | | 4 | 6 | | 6 | 131,127 | 65,713 | 606 | 180 | 779 | 150 | | 101 | 150 |
| Seranton Coal Co., | 3 | | 3 | 1 | 1 | 2 | 131,426 | 312,428 | 364 | 364 | 970 | 202 | | 364 | 364 |
| Connell Anthracite Mining Co., | 1 | | 1 | 1 | | 1 | 398,502 | 398,502 | 574 | 168 | 532 | 364 | | 574 | 364 |
| Lockawanna Coal Co., | 1 | | 1 | 1 | | 1 | 224,777 | 112,888 | 378 | 56 | 434 | 378 | | 56 | 378 |
| Scranton Coal Co., | 1 | | 1 | 1 | | 1 | 204,814 | 162,651 | 892 | 238 | 630 | 392 | | 41 | 392 |
| Mt. Jessup Coal Co. Limited, | 1 | | 1 | 1 | | 1 | 92,470 | 46,285 | 204 | 86 | 284 | 204 | | 86 | 204 |
| Northern Anthracite Coal Co., | 1 | | 1 | 2 | | 2 | 31,093 | 20,728 | 131 | 66 | 197 | 66 | | 103 | 103 |
| Temple Coal Co., | 1 | | 1 | 3 | | 3 | 54,593 | 18,335 | 242 | 161 | 403 | 242 | | 44 | 242 |
| O'Boyle-Foy Anthracite Coal Co., | 2 | | 2 | 1 | | 1 | 18,335 | 8,423 | 108 | 24 | 132 | 54 | | 24 | 54 |
| Dolph Coal Co., Limited, | 2 | | 2 | 4 | | 4 | 8,995 | | 72 | 43 | 115 | 46 | | 18 | 46 |
| Sacandaga Coal Co., | 1 | | 1 | | | | | | 21 | 25 | 24 | 21 | | | 21 |
| Carbondale Coal Mining Co., | 1 | | 1 | | | | | | 17 | 7 | 24 | | | | |
| Clinton Falls Coal Co., | | | | | | | | | | | | | | | |
| Miscellaneous Companies, | | | | | | | | | | | | | | | |
| Totals and averages, | 21 | 1 | 22 | 39 | 7 | 46 | 113,173 | 77,093 | 5,022 | 1,951 | 6,973 | 239 | 1,951 | 129 | 279 |

TABLE C.—Causes of Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages |
|---|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|-------------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | |
| Inside | | | | | | | | | | | | | | |
| Falls of roof, | 2 | ... | 3 | 1 | ... | 1 | ... | 1 | ... | 3 | ... | 1 | 12 | 57.15 |
| Mine cars, | ... | 1 | ... | ... | 1 | ... | 1 | 2 | 1 | ... | ... | ... | 6 | 28.57 |
| Explosions of powder and dynamite, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 4.76 |
| Blasts, premature and otherwise, | ... | ... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 2 | 9.52 |
| Totals, | 2 | 1 | 4 | 1 | 1 | 1 | 1 | 4 | 1 | 3 | ... | 2 | 21 | 100.00 |
| Outside | | | | | | | | | | | | | | |
| Scalded by steam, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 100.00 |
| Totals, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 100.00 |
| Grand totals inside and outside, | 2 | 1 | 4 | 1 | 1 | 1 | 1 | 4 | 1 | 4 | ... | 2 | 22 | ..... |

TABLE D.—Causes of Non-Fatal Accidents Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals | Percentages | |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|-------------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | | | |
| Inside | | | | | | | | | | | | | | | |
| Falls of coal, | | | | | | 1 | 1 | | 1 | | | | | 3 | 7.69 |
| Falls of roof, | 2 | 4 | 3 | | | | | | | | | | | 10 | 25.64 |
| Mine cars, | | | | 1 | | 2 | 1 | | 1 | 1 | 1 | | | 8 | 20.51 |
| Explosions of gas, | | | | | | | | | | 6 | | | | 6 | 15.38 |
| Explosions of powder and dynamite, | | 1 | 3 | | | | | | | | | | | 4 | 10.25 |
| Blasts, premature and otherwise, | 1 | | | | 1 | | | | 1 | | | | | 3 | 7.69 |
| Mules, | | | | | | | 1 | | | | | | | 1 | 2.56 |
| Machinery, | | | | | | 1 | | | | | | | | 1 | 2.57 |
| Struck by timber, | | | | | | | | 1 | | | | | | 1 | 2.57 |
| Struck by piece of rock, | | | | | | | | | 1 | | | | | 1 | 2.57 |
| Falling, | | | | | 1 | | | | | | | | | 1 | 2.57 |
| Totals, | 3 | 5 | 6 | 3 | 1 | 4 | 3 | 2 | 3 | 7 | 1 | 1 | 39 | 100.00 | |
| Outside | | | | | | | | | | | | | | | |
| Cars, | | | | | 1 | 1 | | | | | | | | 2 | 28.57 |
| Struck by steam heater, | | | 1 | | | | | | | | | | | 1 | 14.28 |
| Struck by bar, | | 1 | | | | | | | | | | | | 1 | 14.28 |
| Struck by timber, | | 1 | | | | | | | | | | | | 1 | 14.29 |
| Falling, | | | | | | 1 | | | | | | | | 1 | 14.29 |
| Scalded by steam, | 1 | | | | | | | | | | | | | 1 | 14.29 |
| Totals, | 1 | 2 | 1 | | 1 | 2 | | | | | | | | 7 | 100.00 |
| Grand totals inside and outside, | 4 | 7 | 7 | 3 | 2 | 6 | 3 | 2 | 3 | 7 | 1 | 1 | 46 | ..... |  |

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, | 1 | ... | 2 | 1 | ... | 1 | ... | 2 | 1 | 2 | ... | 1 | 11 |
| Miners' laborers, | 1 | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 6 |
| Drivers and runners, | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | 3 |
| Doorboys and helpers, | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | 1 |
| Brakemen, | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 |
| Totals, | 2 | 1 | 4 | 1 | 1 | 1 | 1 | 4 | 1 | 3 | ... | 2 | 21 |
| Outside | | | | | | | | | | | | | |
| Ashmen, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| Totals, | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| Grand totals inside and outside, | 2 | 1 | 4 | 1 | 1 | 1 | 1 | 4 | 1 | 4 | ... | 2 | 22 |

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | | Totals |
|--|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | December | |
| Inside | | | | | | | | | | | | | |
| Miners, | 2 | 5 | 4 | 2 | ... | 1 | ... | 1 | 1 | 1 | 4 | ... | 20 |
| Miners' laborers, | 1 | ... | 2 | 1 | 1 | ... | 1 | 1 | 1 | 3 | ... | ... | 11 |
| Drivers and runners, | ... | ... | ... | ... | ... | 2 | 2 | ... | 1 | ... | ... | 1 | 6 |
| Brakemen, | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 |
| Machine runners, | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 |
| Totals, | 3 | 5 | 6 | 3 | 1 | 4 | 3 | 2 | 3 | 7 | 1 | 1 | 39 |
| Outside | | | | | | | | | | | | | |
| Drivers, | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 |
| Dumppers, | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 |
| Carpenters, | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 |
| Engineers and firemen, | 1 | ... | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 3 |
| Totals, | 1 | 2 | 1 | ... | 1 | 2 | ... | ... | ... | ... | ... | ... | 7 |
| Grand totals inside and outside, | 4 | 7 | 7 | 3 | 2 | 6 | 3 | 2 | 3 | 7 | 1 | 1 | 46 |

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| American, | | | | | 1 | ..... | 1 | ..... | ..... | ..... | ..... | 2 |
| Scottish, | | | | | | | | | | | 1 | 1 |
| Irish, | | | 1 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 |
| German, | | | | | | | | | | 1 | ..... | 1 |
| Polish, | | | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |
| Italian, | | | 1 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 1 |
| Slavonian, | | 1 | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 | ..... | 2 |
| Lithuanian, | | | | | | | | 1 | ..... | 1 | ..... | 2 |
| Austrian, | | | | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 |
| Russian, | | | 1 | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 1 |
| Totals, | 2 | 1 | 4 | 1 | 1 | 1 | 1 | 4 | 1 | 4 | 2 | 23 |

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

| | Months | | | | | | | | | | | |
|-------------------|---------|----------|-------|-------|-------|-------|-------|--------|-----------|---------|----------|--------|
| | January | February | March | April | May | June | July | August | September | October | November | Totals |
| American, ..... | ..... | ..... | 1 | ..... | ..... | 2 | 1 | ..... | 1 | ..... | ..... | 5 |
| English, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 |
| German, | 1 | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 2 |
| Polish, ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | ..... | 1 | ..... | 2 |
| Italian, | 1 | 2 | 2 | 1 | 1 | ..... | 1 | ..... | 1 | ..... | ..... | 15 |
| Slavonian, ..... | ..... | ..... | ..... | ..... | ..... | 2 | 1 | ..... | ..... | 1 | ..... | 4 |
| Lithuanian, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | ..... | 1 |
| Austrian, | 2 | 1 | 1 | 2 | ..... | ..... | ..... | 1 | 1 | ..... | ..... | 9 |
| Russian, ..... | ..... | 2 | 2 | ..... | ..... | 1 | ..... | ..... | ..... | ..... | ..... | 5 |
| Totals, | 4 | 7 | 7 | 3 | 2 | 6 | 2 | 2 | 2 | 7 | 1 | 46 |

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

| Names of Operators and Mines | Kind of opening | Gaseous or non-gaseous | Method of ventilation | Diameter of fan in feet and inches | Width of blades in feet and inches | Depth of blades in feet and inches | Number of revolutions per minute | Water gauge developed—in inches | Name of fan | Power used | Area of furnace bars in square feet | Number of splits of air currents | Number of cubic feet of air per minute entering the mine at inlet | Total number of cubic feet of air per minute circulating in all the splits | Number of cubic feet of air per minute passing out at outlet | Number of persons employed inside |
|---|-----------------|------------------------|-----------------------|------------------------------------|------------------------------------|------------------------------------|----------------------------------|---------------------------------|---------------|-------------------|-------------------------------------|----------------------------------|---|--|--|-----------------------------------|
| Hillside Coal and Iron Co. Forest City Colliery: | Shaft,... | Non-gas... | { Fan, | 18 | 6 | 5 | 70 | 1.5 | { Guibal, ... | { Steam, | .. | 5 | 57,690 | 53,160 | 63,130 | 166 |
| Forest City No. 2 (Dun- | Shaft,... | | { Fan, | 24 | 7 | 7 | 65 | 1 | | { Steam, | 70,710 | 5 | 72,930 | 70,710 | 76,277 | 188 |
| more), | Shaft,... | | { Fan, | 20 | 6.6 | 5.5 | 60 | .5 | | { Steam, | 84,310 | 5 | 82,706 | 80,390 | 244 | |
| Clifford, | Slope, ... | | { Fan, | 20 | 6.6 | 5.5 | 60 | | | { Electricity, .. | 85,000 | 5 | 85,000 | 75,375 | 86,466 | 222 |
| Gray, | | | | | | | | | | | | | | | | |
| Delaware and Hudson Co. Clinton Colliery: | Slope, ... | Non-gas... | { Fan, | 17 | 4 | 4.4 | 95 | 1.6 | { Guibal, ... | { Electricity, .. | .. | 3 | 52,600 | 50,620 | 54,695 | 118 |
| Clinton No. 3, | Slope, ... | | { Fan, | 20 | 5 | 5 | 75 | 1.4 | | { Steam, | 77,820 | 4 | 77,820 | 78,030 | 78,030 | 212 |
| Clinton No. 8, | Drift, ... | | { Fan, | 10 | 2.5 | 2.5 | 112 | .6 | | { Steam, | 58,675 | 1 | 57,500 | 58,675 | 58,500 | 51 |
| Clinton No. 5, | Drift, ... | | { Fan, | 20 | 2.5 | 2.5 | 112 | .5 | | { Steam, | 57,000 | 1 | 57,000 | 58,450 | 58,450 | 72 |
| Clinton No. 7, | Slope, ... | | { Fan, | 20 | 5 | 5 | 75 | .3 | | { Electricity, .. | 51,430 | 4 | 53,360 | 51,430 | 56,990 | 159 |
| Clinton No. 10, | | | | | | | | | | | | | | | | |
| Seranton Coal Co. Ontario Colliery: | Tunnel, ... | Non-gas... | { Fan, | 14 | 4 | 5 | 90 | .6 | { Guibal, ... | { Steam, ...} | .. | 3 | 65,900 | 42,000 | 71,800 | 140 |
| Ontario, | Shaft, ... | | { Fan, | 20 | 6 | 6.3 | 65 | 1.2 | | { Steam, ...} | 65,000 | 2 | 72,600 | 65,000 | 81,000 | 210 |
| Sturges, | Shaft, ... | | { Fan, | 15 | 4 | 4.6 | 75 | .5 | | { Steam, ...} | 45,000 | 2 | 45,000 | 49,000 | 49,300 | 80 |
| Blue Ridge, | Tunnel, ... | | { Fan, | 12 | 3.3 | 3.6 | 100 | .7 | | | 39,000 | 3 | 49,000 | 39,000 | 55,500 | 130 |
| Klondike, | | | | | | | | | | | | | | | | |
| Cornell Anthracite Mining Co. Cornell Colliery: | Drift, | Non-gas... | Fan, | 16 | 4 | 4 | 100 | .2 | { Guibal, ... | { Electricity, .. | .. | 5 | 84,000 | 66,000 | 84,000 | 364 |

TABLE I.—Continued

| Names of Operators and Mines | Kind of opening | | Gaseous or non-gaseous | | Method of ventilation | | Diameter of fan in feet and inches | | Width of blades in feet and inches | | Depth of blades in feet and inches | | Number of revolutions per minute | | Water gauge developed—in inches | | Name of fan | | Power used | | Area of furnace bars in square feet | | Number of splits of air currents | | Number of cubic feet of air per minute entering the mine at inlet | | Total number of cubic feet of air per minute circulating in all the splits | | Number of cubic feet of air per minute passing out at outlet | | Number of persons employed inside | |
|--|-----------------|-------------|------------------------|-------|-----------------------|-------|------------------------------------|-------|------------------------------------|-------|------------------------------------|-------|----------------------------------|-------|---------------------------------|-------|-------------|-------|------------|-------|-------------------------------------|-------|----------------------------------|-------|---|-------|--|-------|--|-------|-----------------------------------|-------|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clinton Falls Coal Co. Clinton Falls Colliery; Clinton Falls, | Drift, | Non-gas, .. | Natural, .. | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Wachina-Taylor Anthracite Coal Co. Wachina-Taylor Colliery; Wachina-Taylor, | Slope, | Non-gas, .. | † | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |

† Ventilated by O'Boyle-Foy Anthracite Coal Co., on southwest split.

TABLE 1.—Operators, location of collieries, railroads, etc.

| Names of Operators and Collieries | County | Name of General Superintendent | Post Office | Name of Superintendent | Post Office | Railroad to Mine |
|--|---|--------------------------------|-------------------|----------------------------|--------------------|--|
| Hillside Coal and Iron Co. Forest City, | Susquehanna, | Joseph P. Jennings, | Scranton, | Il. E. Yewens, | Forest City, | Erie |
| Delaware and Hudson Co. Clinton, | { Lackawanna, ... { Wyoming, ... { Susquehanna, ... } | E. R. Pettibone, | Dorrancton, | C. H. Constantie, ... | Carbondale, | D. and H. |
| Clinton Washery, | | | | | | |
| Scranton Coal Co. Ontario, | { Lackawanna, ... | W. L. Allen, | Peckville, | Daniel Young, | Scranton, | N. Y. O. and W. |
| Connell Anthracite Mining Co. Connell, | Sullivan, | W. L. Connell, | Scranton, | | | Lehigh Valley |
| Lackawanna Coal Co., Limited Lackawanna, | Lackawanna, ... | F. H. Hemelright, | Scranton, | Joseph Reese, | Olyphant, | Erie and D. L. and W. |
| Moosie Mountain Coal Co. Marshwood, | Lackawanna, ... | C. P. Ford, | Marshwood, | C. P. Ford, | Marshwood, | D. L. and W. |
| Mt. Jessup Coal Co., Limited Northern Anthracite Coal Co. Murray, | Lackawanna, ... | | | Jolia T. Cartwright, | Peckville, | D. L. and W.; N. Y. O. and W.; Erie; and D. and H. |
| Temple Coal Co. Northwest, | Sullivan, | M. J. Murray, Sr., | Dunmore, | J. F. Flannelly, | Lopez, | Lehigh Valley |
| O'Boyle-Foy Anthracite Coal Co. O'Boyle-Foy, | Lackawanna, ... | F. H. Hemelright, | Scranton, | T. J. Aston, | Carbondale, | N. Y. O. and W. |
| Dolph Coal Co., Limited Dolph, | Sullivan, | M. W. O'Boyle, | Pittston, | M. J. Clemons, | Murray, | Lehigh Valley |
| | Lackawanna, ... | W. G. Robertson, ... | Scranton, | W. G. Robertson, ... | Scranton, | Erie |

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and permissible explosives used, etc.

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employees | Total production of coal in tons | Number of days worked | Number of employes | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|-----------------------------------|-----------------|--|--|--|----------------------------------|-----------------------|--------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Hillside Coal and Iron Co. | | | | | | | | | | | | | |
| Forest City, | Susquehanna, .. | 533,038 | 42,730 | 7,911 | 583,729 | 297 | 1,395 | 4 | 1 | 573,125 | 48,750 | 37,500 | 77 |
| Delaware and Hudson Co. | | | | | | | | | | | | | |
| Clinton, | Lackawanna, { | 404,012 | 22,048 | 3,539 | 439,599 | 261 | 779 | 4 | 9 | 418,375 | 66,319 | ..... | 84 |
| Clinton Washery, | Wayne, | 99,015 | 1,885 | ..... | 94,910 | 158 | | | | | | | |
| Totals, | Susquehanna, .. | 497,027 | 23,913 | 3,539 | 524,509 | ..... | 779 | 4 | 9 | 418,375 | 66,319 | ..... | 84 |
| Scranton Coal Co. | | | | | | | | | | | | | |
| Ontario, | Lackawanna, { | 246,719 | 47,205 | 2,709 | 296,633 | 197 | 923 | 3 | 7 | 155,375 | 292,250 | ..... | 107 |
| Ontario Washery, | Lackawanna, .. | 81,931 | 15,500 | 214 | 97,645 | 177 | 47 | | | | | | |
| Totals, | | 328,650 | 62,705 | 2,923 | 384,278 | ..... | 970 | 3 | 7 | 155,375 | 292,250 | ..... | 107 |
| Connell Anthracite Mining Co. | | | | | | | | | | | | | |
| Connell, | Sullivan, | 277,462 | 31,200 | 4,066 | 312,428 | 285 | 532 | 1 | 1 | 300,100 | 37,664 | ..... | 9 |
| Lackawanna Coal Co., Limited | | | | | | | | | | | | | |
| Lackawanna, | Lackawanna, .. | 267,292 | 30,572 | 10,638 | 308,502 | 250 | 732 | 1 | 3 | 386,050 | 74,975 | ..... | 21 |
| Moosic Mountain Coal Co. | | | | | | | | | | | | | |
| Marshwood, | Lackawanna, .. | 205,694 | 18,656 | 2,427 | 224,777 | 233 | 434 | 2 | 1 | 158,125 | 125,625 | ..... | 50 |
| Mt. Jessup Coal Co., Limited | | | | | | | | | | | | | |
| Mt. Jessup, | Lackawanna, .. | 179,125 | 21,619 | 4,070 | 204,814 | 261 | 630 | 1 | 10 | 157,275 | 54,267 | ..... | 41 |

TABLE 2.—Continued

| Names of Operators and Collieries | County | Number of tons of coal shipped to market | Number of tons used at collieries for steam and heat | Number of tons sold to local trade and used by employes | Total production of coal in tons | Number of days worked | Number of employees | Number of fatal accidents | Number of non-fatal accidents | Explosives | | | Number of horses and mules |
|---|-----------------|--|--|---|----------------------------------|-----------------------|---------------------|---------------------------|-------------------------------|---------------------------------|-----------------------------------|---|----------------------------|
| | | | | | | | | | | Number of pounds of powder used | Number of pounds of dynamite used | Number of pounds of permissible explosives used | |
| Murray, | Sullivan, | 155,176 | 5,000 | 3,475 | 163,651 | 171 | 390 | ..... | 1 | 136,000 | 1,800 | ..... | 21 |
| Northwest, | Lackawanna, .. | 86,629 | 5,24 | 697 | 92,470 | 158 | 284 | 1 | 2 | 96,300 | 6,988 | ..... | 29 |
| O'Boyle-Foy Anthracite Coal Co. | Sullivan, | 53,785 | 7,500 | 900 | 62,485 | 150 | 197 | 2 | 3 | 48,425 | 10,000 | ..... | 18 |
| Dolph, | Lackawanna, .. | 38,297 | 15,000 | 1,385 | 54,592 | 81 | 403 | ..... | 1 | 78,975 | 13,650 | ..... | 39 |
| Sacandaga No. 1, | Lackawanna, .. | 21,591 | 385 | 3,922 | 25,898 | 255 | 97 | 2 | 3 | 76,450 | 9,875 | ..... | 6 |
| Sacandaga No. 2, | Lackawanna, .. | 10,471 | ..... | ..... | 10,471 | 255 | 35 | ..... | ..... | 450 | 4,247 | ..... | 5 |
| Totals, ..... | ..... | 32,592 | 385 | 3,922 | 36,639 | ..... | 132 | 2 | 3 | 76,900 | 14,122 | ..... | 11 |
| Carlondale Coal Mining Co. | Lackawanna, .. | 29,985 | 4,000 | 8,706 | 33,691 | 246 | 115 | ..... | 4 | 48,750 | 5,625 | ..... | 7 |
| Clinton Falls, | Wayne, | 7,191 | 484 | 820 | 8,995 | 146 | 46 | 1 | ..... | 4,000 | 200 | 200 | 9 |
| Wachina-Taylor Anthracite Coal Co. | Sullivan, | 1,000 | 300 | 37 | 1,337 | 11 | 24 | ..... | ..... | 575 | ..... | ..... | 4 |
| Grand totals, ..... | ..... | 2,681,323 | 269,878 | 55,426 | 3,006,627 | ..... | 6,973 | 22 | 46 | 2,428,350 | 662,735 | 37,700 | 538 |

TABLE 2.—Part 2
Number and kinds of boilers and locomotives in use, number of steam engines, pumps, electric dynamos and air compressors in use, etc.

| Names of Operators | County | Number of Boilers | | | Locomotives | | | | Total horse power | Number of steam engines of all classes | Total horse power | Number of pumps delivering water to surface | Capacity in gallons per minute | Quantity delivered to surface per minute—gallons | Number of electric dynamos | Number of air compressors |
|--|--------------------|-------------------|-------------|---------|-------------|----------|-------|-------|-------------------|--|-------------------|---|--------------------------------|--|----------------------------|---------------------------|
| | | Cylindrical | Horse power | Tubular | Horse power | Gasoline | Steam | Air |  |  |  |  |  |  |  |  | Electric |
| Hillside Coal and Iron Co., | Susquehanna, ..... | ..... | ..... | 31 | 3,740 | 3,740 | ..... | 5 | ..... | 19 | 45 | 3,500 | 12 | 5,000 | 2,000 | ..... |
| Delaware and Hudson Co., | Lackawanna, ..... | ..... | ..... | 5 | 1,295 | 1,295 | ..... | ..... | ..... | 1 | 40 | 1,862 | 21 | 1,600 | 1,000 | ..... |
| Scranton Coal Co., | Wayne, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Connell Anthracite Mining Co., | Lackawanna, | 13 | 260 | 14 | 1,900 | 2,160 | ..... | 4 | ..... | 2 | 43 | 2,536 | 8 | 2,980 | 2,000 | ..... |
| Connell Anthracite Mining Co., | Sullivan, ..... | ..... | ..... | 9 | 1,900 | 1,900 | ..... | ..... | ..... | 12 | 10 | 1,530 | ..... | 800 | 70 | ..... |
| Lackawanna Coal Co., Limited, | Lackawanna, ..... | ..... | ..... | 12 | 2,810 | 2,810 | ..... | ..... | ..... | 9 | 21 | 2,530 | 5 | 8,500 | 4,800 | ..... |
| Monongahela Coal Co., | Lackawanna, ..... | ..... | ..... | 7 | 550 | 2,550 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Mohawk Coal Co., Limited, | Lackawanna, ..... | ..... | ..... | 12 | 2,940 | 2,940 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Northern Anthracite Coal Co., | Susquehanna, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 17 | 850 | ..... | 3,300 | 1,690 | ..... |
| Temple Coal Co., | Sullivan, ..... | ..... | ..... | 4 | 580 | 580 | ..... | ..... | ..... | ..... | 6 | 370 | ..... | 3,000 | 2,950 | ..... |
| O'Boyle-Foy Anthracite Coal Co., | Lackawanna, ..... | ..... | ..... | ..... | 500 | 500 | ..... | ..... | ..... | ..... | 18 | 1,350 | ..... | 800 | 800 | ..... |
| Dolph Coal Co., Limited, | Sullivan, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Sacandaga Coal Co., | Lackawanna, ..... | ..... | ..... | 13 | 2,320 | 2,320 | ..... | ..... | ..... | 4 | 35 | 1,755 | 5 | 1,200 | 1,000 | ..... |
| Carbondale Coal Mining Co., | Lackawanna, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Clinton Falls Coal Co., | Lackawanna, ..... | ..... | ..... | 6 | 375 | 375 | ..... | ..... | ..... | ..... | 8 | 210 | ..... | 1 | 260 | 75 |
| Wachua-Taylor Anthracite Coal Co., | Wayne, ..... | ..... | ..... | 1 | 40 | 40 | ..... | ..... | ..... | ..... | 3 | 200 | ..... | ..... | ..... | ..... |
| ..... | Sullivan, ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| ..... | ..... | ..... | ..... | 1 | 80 | 80 | ..... | ..... | ..... | ..... | 2 | 65 | ..... | 1 | 200 | 200 |
| Totals, ..... | ..... | 13 | 260 | 123 | 19,865 | 20,135 | 4 | 32 | ..... | 50 | 257 | 17,068 | 46 | 28,630 | 17,025 | 22 |

TABLE 3.—Number of each class of employees inside and outside of mines

| Names of Operators | County | Inside | | | | | | | | | | Outside | | | | | | | Grand total | | | |
|---------------------------------------|-----------------|--------------|------------------------|----------------------------|--------|------------------|---------------------|----------------------|---------|-------------|---------------------|--------------|-----------------|---------|----------------------------|-----------------------|---------------------|--------------------|-------------|------------------------|--------------------|---------------|
| | | Mine foremen | Assistant mine foremen | Fire bosses and assistants | Miners | Miners' laborers | Drivers and runners | Doorboys and helpers | Pumpmen | Company men | All other employees | Total inside | Superintendents | Foremen | Blacksmiths and carpenters | Engineers and firemen | Slatepickers (boys) | Slatepickers (men) | | Bookkeepers and clerks | All other employes | Total outside |
| Hillside Coal and Iron Co., | Susquehanna, .. | 3 | 9 | .... | 414 | 389 | 77 | 24 | 7 | 127 | 60 | 1,110 | 1 | 1 | 25 | 33 | 50 | 24 | 3 | 148 | 285 | 1,395 |
| Delaware and Hudson Co., | Lackawanna, .. | 1 | 4 | .... | 190 | 209 | 77 | 32 | 11 | 53 | 22 | 589 | .. | 1 | 7 | 30 | 12 | 20 | 2 | 108 | 180 | 779 |
| Seranton Coal Co., | Susquehanna, .. | 1 | 5 | .... | 250 | 194 | 83 | 6 | 11 | 8 | 56 | 696 | .. | 1 | 17 | 54 | 61 | 85 | 1 | 145 | 364 | 970 |
| Connell Anthracite Mining Co., | Sullivan, .. | 1 | 1 | .... | 192 | 56 | .... | 7 | 7 | 8 | 99 | 364 | .. | 1 | 9 | 11 | 23 | 24 | 5 | 145 | 168 | 532 |
| Lackawanna Coal Co., Limited, | Lackawanna, .. | 2 | 2 | 6 | 175 | 211 | 6 | 10 | 10 | 64 | 88 | 574 | 1 | 1 | 18 | 20 | .... | 25 | 4 | 89 | 158 | 732 |
| Moosic Mountain Coal Co., | Lackawanna, .. | 2 | 1 | .... | 168 | 125 | 50 | 9 | 2 | 12 | 9 | 378 | 1 | 1 | 8 | 5 | .... | .... | 39 | 56 | 434 | 732 |
| Mt. Jessup Coal Co., Limited, | Lackawanna, .. | 1 | 1 | 8 | 120 | 172 | 48 | 7 | 11 | .... | 24 | 392 | 1 | 3 | 16 | 30 | 62 | 20 | 3 | 103 | 238 | 630 |
| Northern Anthracite Coal Co., .. | Sullivan, .. | 1 | 1 | .... | 72 | 72 | 30 | 7 | 1 | 21 | .... | 204 | 1 | 2 | 5 | 6 | 15 | 39 | 3 | 25 | 96 | 300 |
| Temple Coal Co., | Lackawanna, .. | 2 | 1 | .... | 80 | 74 | 18 | 2 | 2 | 10 | 16 | 294 | 1 | 1 | 6 | 7 | .... | 20 | 2 | 43 | 80 | 284 |
| O'Boyle-Foy Anthracite Coal Co., .. | Sullivan, .. | 2 | 2 | .... | 60 | 42 | 12 | 2 | 2 | 6 | 6 | 131 | 1 | 1 | 3 | 5 | 3 | 18 | 1 | 34 | 66 | 137 |
| Dodrig Coal Co., Limited, | Lackawanna, .. | 2 | 2 | .... | 116 | 80 | 16 | .. | 2 | 18 | 6 | 242 | 1 | 1 | 10 | 19 | 29 | 23 | 4 | 74 | 161 | 493 |
| Sacandaga Coal Co., | Lackawanna, .. | 2 | 2 | .... | 47 | 40 | 13 | .. | .. | 6 | .. | 108 | 2 | 1 | 1 | 5 | 3 | .. | 1 | 11 | 43 | 115 |
| Carbondale Coal Mining Co., | Lackawanna, .. | 1 | 1 | .... | 26 | 26 | 7 | 4 | 1 | 3 | 4 | 72 | 1 | 1 | 1 | 1 | 3 | .. | 1 | 21 | 43 | 115 |
| Clinton Falls Coal Co., | Wayne, .. | 1 | 1 | .... | 8 | 7 | 5 | .. | .. | .. | .. | 17 | 1 | 1 | 1 | 2 | .. | .. | .. | 16 | 25 | 46 |
| Wachna-Taylor Anthracite Coal Co., .. | Sullivan, .. | 1 | .. | .... | 12 | .. | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 2 | 1 | .. | 7 | 24 |
| Totals, | .. | 22 | 25 | 14 | 1,930 | 1,697 | 444 | 103 | 67 | 330 | 390 | 5,022 | 13 | 17 | 133 | 235 | 263 | 301 | 35 | 954 | 1,951 | 6,973 |

TABLE 4.—Fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Number of widows | Number of orphans | Name of Colliery | County | Nature and Cause of Accident in Brief |
|---------------------------|--------------------------|----------------|-----------------|-----|-------------------|------------------|-------------------|---------------------|-----------------------------|---|
| Jan. | 6 Stanley Sapotow, | Polish, | Laborer, .. | 43 | M. | 1 | 2 | Clinton Falls, .. | Wayne, | Killed by fall of roof at face of chamber. |
| Feb. | 18 Andrew Stavish, | Polish, | Miner, | 28 | M. | 1 | 6 | Concord, | Sullivan, | Killed by fall of roof at face of chamber. |
| March | 25 Joseph Cosko, | Slavonian, .. | Laborer, .. | 35 | S. | 1 | 1 | Sacandaga No. 1, .. | Lackawanna, .. | Killed by cars on slope. |
| 3 Frank Mangana, | Italian, | Laborer, .. | 25 | M. | 1 | 1 | 1 | Forest City, | Sacandaga, | Killed by fall of roof at face of chamber. |
| 12 Frank Lavetto, | Polish, | Laborer, .. | 23 | S. | 1 | 1 | 1 | Northwest, | Lackawanna, .. | Killed by fall of roof at face of chamber. |
| 13 Alex Gattuso, | Polish, | Miner, | 40 | M. | 1 | 1 | 1 | Ontario, | Lackawanna, .. | Killed by fall of roof at face of chamber. |
| 15 Alex Gattuso, | Russian, | Miner, | 38 | M. | 1 | 1 | 1 | Mt. Jessup, | Lackawanna, .. | Killed by explosion of blast at face of chamber. |
| 16 Daniel O'Dwyer, | Irish, | Miner, | 43 | M. | 1 | 1 | 1 | Clinton, | Wayne and } Lackawanna } | Killed by fall of roof at face of chamber. |
| April | 27 Frank Sulnuek, | Austrian, ... | Miner, | 35 | M. | 1 | 3 | Clinton, | Wayne and } Lackawanna } | Killed by fall of roof at face of chamber. |
| May | 11 Montfith Brown, | American, .. | Brickman, .. | 19 | S. | 1 | 1 | Forest City, | Susquehanna, .. | Killed by cars on gangway. |
| June | 5 Louis Tomosona, | Italian, | Miner, | 26 | S. | 1 | 1 | O'Boyle-Fox, | Sullivan, | Killed by fall of roof on pillar work. |
| July | 17 Elsworth Simon, | American, ... | Driver, | 18 | S. | 1 | 1 | Clinton, | Wayne and } Lackawanna } | Killed by cars on gangway. |
| Aug. | 4 Martin Martzinski, .. | Lithuanian, .. | Driver, | 20 | S. | 1 | 1 | Clinton, | Wayne and } Lackawanna } | Killed by cars at head of plane. |
| 24 Anton Azello, | Italian, | Miner, | 31 | M. | 1 | 1 | 1 | Sacandaga No. 1, .. | Lackawanna, .. | Killed by explosion of blast at face of chamber. |
| 26 Anthony Baker, | Austrian, ... | Miner, | 36 | M. | 1 | 1 | 1 | Clinton, | Wayne and } Lackawanna } | Killed by fall of roof at face of chamber. |
| Sept. | 21 Joseph Ondrako, | Slavonian, .. | Door-tender, .. | 19 | S. | 1 | 1 | Forest City, | Lackawanna, .. | Killed by cars on gangway. |
| Oct. | 2 Patrick McNulty, | Irish, | Miner, | 55 | M. | 1 | 1 | Forest City, | Susquehanna, .. | Killed by fall of roof at face of chamber. |
| 8 Harry Konevitch, | Russian, | Laborer, .. | 21 | S. | 1 | 1 | 1 | Lackawanna, | Lackawanna, .. | Killed by fall of roof at face of chamber. |
| 17 William Yoris, | Lithuanian, .. | Miner, | 40 | M. | 1 | 1 | 2 | Ontario, | Lackawanna, .. | Killed by fall of roof at face of chamber. |
| 27 Thomas McConnell, .. | German, | Ashman, ... | 20 | S. | 1 | 1 | 1 | Marshwood, | Lackawanna, .. | Scalded by steam when pipe burst in boiler house. |
| Dec. | 30 John Novak, | Slavonian, .. | Miner, | 46 | M. | 1 | 1 | Marshwood, | Lackawanna, .. | Killed by fall of roof at face of chamber. |
| 14 James H. Spence, | Scotch, | Laborer, ... | 43 | M. | 1 | 1 | 5 | O'Boyle-Fox, | Sullivan, | Killed by fall of roof at face of chamber. |
| 23 David Eac, | Italian, | Miner, | 25 | S. | 1 | 1 | 1 | Ontario, | Lackawanna, .. | Killed by explosion of dynamite at face of chamber. |

TABLE 5.—Non-fatal accidents inside and outside of mines

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|-------|--------------------------|----------------|------------------|-----|-------------------|---------------------|--------------------------|---|
| Jan. | 4 Rudolf Rossa, | Austrian, .. | Laborer, | 26 | S. | Northwest, | Lackawanna, .. | Leg fractured by fall of pillar work. |
| | John Marley, | Italian, | Miner, | 30 | M. | Ontario, | Lackawanna, .. | Arm fractured by explosion of blast at face of chamber. |
| 15 | Frank Lichen, | Austrian, ... | Miner, | 38 | M. | Clinton, | Wayne and Lackawanna, .. | Leg fractured by fall of roof at face of chamber. |
| 25 | Edward Gosart, | German, | Engineer, | 55 | M. | Marshwood, | Lackawanna, .. | Engineer killed by steam when steam pipe burst. Outside. |
| Feb. | 2 George Howovits, | Russian, | Carpenter, | 50 | S. | Lackawanna, | Lackawanna, .. | Body bruised. Struck by plank. Outside. |
| 7 | Harry Meers, | English, | Carpenter, | 55 | M. | Lackawanna, | Lackawanna, .. | Rib fractured by car falling on him in boiler house. Outside. |
| 8 | Joseph Bayliff, | English, | Miner, | 40 | M. | Clinton, | Wayne and Lackawanna, .. | Back bruised by fall of roof at face of chamber. |
| 16 | Toney Martine, | Italian, | Miner, | 30 | M. | Mt. Jossup, | Lackawanna, .. | Back bruised by fall of roof at face of chamber. |
| 18 | Andrew Costie, | Russian, | Miner, | 39 | M. | Dolph, | Lackawanna, .. | Head lacerated by fall of roof at face of chamber. |
| 20 | Joseph Nosil, | Austrian, | Miner, | 25 | S. | O'Boyle-Poy, | Sullivan, | Leg fractured by fall of roof at face of chamber. |
| 26 | Paul Cullette, | Italian, | Miner, | 33 | M. | Ontario, | Lackawanna, .. | Explosion of dynamite at face of chamber. |
| March | 1 John Lasko, | Austrian, ... | Laborer, | 47 | M. | O'Boyle-Poy, | Sullivan, | Leg fractured by fall of roof at face of chamber. |
| 10 | Joseph Barazo, | Italian, | Miner, | 28 | M. | Rolands, | Lackawanna, .. | Face lacerated by explosion of dynamite at face of chamber. |
| | Pater Feglemewa, | Italian, | Laborer, | 21 | S. | Rolands, | Lackawanna, .. | Face lacerated by explosion of dynamite at face of chamber. |
| 22 | Michael Ewaniok, | Russian, | Miner, | 30 | M. | Ontario, | Lackawanna, .. | Collar bone fractured by fall of roof at face of chamber. |
| | John Tolasko, | Italian, | Miner, | 48 | M. | Ontario, | Lackawanna, .. | Leg fractured by fall of roof at face of chamber. |
| 24 | Adam Naviski, | Russian, | Miner, | 42 | S. | Rolands, | Lackawanna, .. | Explosion of dynamite at face of chamber. |
| 27 | Ambrose Carden, | American, ... | Engineer, | 22 | S. | Sacandaga No. 1, .. | Lackawanna, .. | Thigh bruised by explosion of powder at face of chamber. |
| April | 7 James Orvall, | Italian, | Laborer, | 28 | S. | Rolands, | Wayne and Lackawanna, .. | Legs fractured by cars on slope. |
| 10 | George Baker, | Austrian, ... | Miner, | 46 | M. | Clinton, | Lackawanna, .. | Leg fractured by fall of roof at face of chamber. |

TABLE 5.—Continued

| Date | Name of Person | Nationality | Occupation | Age | Married or single | Name of Colliery | County | Nature and Cause of Accident in Brief |
|----------|-------------------------|-----------------|---------------------|-----|-------------------|----------------------|---------------------------|--|
| April 22 | John Bishop, | Austrian, ... | Miner, | 25 | S. | O'Toyle-Poy, | Sullivan, | Arm fractured by explosion of blast at face of chamber. |
| May 5 | Edward Laskey, | Polish, | Dumper, | 26 | S. | Forest City, | Susquehanna, ... | Skull fractured by cars on rock dump. Out-side. |
| 23 | Philip Finera, | Italian, ... | Laborer, | 22 | S. | Sacandaga No. 1, ... | Lackawanna, ... | Back bruised by falling while walking up slope. |
| June 9 | John Watral, | Russian, ... | Miner, | 41 | M. | Ontario, | Lackawanna, ... | Angle fractured by fall of coal at face of chamber. |
| 16 | William Dodin, | American, ... | Runner, | 22 | S. | Clinton, | Wayne and Lackawanna, ... | Ruptured while lifting car on gangway. |
| 17 | Elias Broeg, | American, ... | Carpenter, ... | 26 | M. | Ontario, | Lackawanna, ... | Body bruised by falling from scaffold. Out-side. |
| 21 | Herman Gresky, | German, ... | Machine-runner, ... | 38 | M. | Cornell, | Sullivan, | Foot fractured by mining machine in chamber. |
| 28 | Michael Hudock, | Slavonian, ... | Runner, | 25 | M. | Mt. Jessup, | Lackawanna, ... | Rib fractured by cars on gangway. |
| 30 | Favola Baludet, | Slavonian, ... | Driver, | 19 | M. | Mt. Jessup, | Lackawanna, ... | Arm fractured by cars near breaker. Out-side. |
| July 14 | Michael Tompka, | American, ... | Driver, | 18 | S. | Clinton, | Wayne and Lackawanna, ... | Back bruised by cars on gangway. |
| 22 | Gregory Angelo, | Italian, ... | Driver, | 18 | S. | Clinton, | Wayne and Lackawanna, ... | Head lacerated by being kicked by a mule. |
| 27 | Frank Halciers, | Slavonian, ... | Laborer, | 34 | M. | Ontario, | Lackawanna, ... | Leg fractured by fall of coal at face of Log chamber. |
| Aug. 9 | Stanley Blesavage, ... | Lithuanian, ... | Miner, | 45 | M. | Northwest, | Lackawanna, ... | Leg fractured by rock sliding on him from gob. |
| 14 | Anthony Bieay, | Austrian, ... | Laborer, ... | 27 | M. | Clinton, | Wayne and Lackawanna, ... | Chest crushed by timber falling on him at face of chamber. |
| Sept. 2 | Dominiek Biagob, ... | Italian, ... | Miner, | 33 | M. | Mt. Jessup, | Lackawanna, ... | Arms fractured by explosion of blast at face. |
| 16 | Gerald Fitzpatrick, ... | American, ... | Driver, | 17 | S. | Clinton, | Wayne and Lackawanna, ... | Ruptured while lifting car on gangway. |
| 22 | Joseph Zavera, | Austrian, ... | Laborer, ... | 21 | S. | Clinton, | Wayne and Lackawanna, ... | Knee bruised by fall of coal at face of chamber. |
| Oct. 8 | Joseph Malotiskie, ... | Polish, | Miner, | 31 | M. | Sacandaga No. 1, ... | Lackawanna, ... | Rib fractured by cars on gangway. |

| Oct. | 26 | Dominick Gorpelle, Dogg Korpenti, Domenico, Angelo Biondi, Thomas Gimboli, Michael Heene, William Sheere, Michael Buck, | Italian, Italian, Italian, Italian, Italian, Slavonian, English, Austrian, | Miner, Miner, Laborer, Laborer, Laborer, Brakepan, Driver, | 39 M. 28 M. 29 S. 28 S. 29 M. 26 S. 28 S. 28 S. 19 S. | Mt. Jessup, Lackawanna, Murray, | Lackawanna, Lackawanna, Sullivan, | Hands and face burned by explosion of gas on gangway. Hips bruised by caps on gangway. Shoulder and el by caps on gangway. |
|------|----|--|---|--|---|---------------------------------------|---|--|
| | | | | | | | | |
| Nov. | 8 | | | | | | | |
| Dec. | 8 | | | | | | | |

CONDITION OF COLLIERIES

HILLSIDE COAL AND IRON COMPANY

Forest City Colliery.—Ventilation, drainage and condition as to safety, good.

DELAWARE AND HUDSON COMPANY

Clinton Colliery.—Ventilation, drainage and condition as to safety, good.

SCRANTON COAL COMPANY

Ontario Colliery.—Ventilation, fair. Drainage and condition as to safety, good.

CONNELL ANTHRACITE MINING COMPANY

Connell Colliery.—Ventilation, drainage and condition as to safety, good.

LACKAWANNA COAL COMPANY, LIMITED

Lackawanna Colliery.—Ventilation, drainage and condition as to safety, good.

MOOSIC MOUNTAIN COAL COMPANY

Marshwood Colliery.—Ventilation and safety conditions, good. Drainage, poor.

MT. JESSUP COAL COMPANY, LIMITED

Mt. Jessup Colliery.—Ventilation, drainage and condition as to safety, good.

NORTHERN ANTHRACITE COAL COMPANY

Murray Colliery.—Ventilation, drainage and condition as to safety, good.

TEMPLE COAL COMPANY

Northwest Colliery.—Ventilation, fair. Drainage and condition as to safety, good.

O'BOYLE-FOY ANTHRACITE COAL COMPANY

O'Boyle-Foy Colliery.—Ventilation, fair. Drainage, poor. Condition as to safety, good.

DOLPH COAL COMPANY, LIMITED

Dolph Colliery.—Ventilation, drainage and condition as to safety, good.

SACANDAGA COAL COMPANY

Sacandaga Nos. 1 and 2 Collieries.—Ventilation, drainage and condition as to safety, good.

CARBONDALE COAL MINING COMPANY

Bolands Colliery.—Ventilation, fair. Drainage and condition as to safety, good.

CLINTON FALLS COAL COMPANY

Clinton Falls Colliery.—Ventilation, drainage and condition as to safety, good.

WACHNA-TAYLOR ANTHRACITE COAL COMPANY

Wachna-Taylor Colliery.—Ventilation and drainage, fair. Condition as to safety, good.

IMPROVEMENTS

HILLSIDE COAL AND IRON COMPANY

Forest City Colliery.—Inside: At Gray's slope, completed a motor barn, pump room and mine foremen's office of fireproof construction, and installed a 1000-gallon centrifugal pump, which delivers water direct to the surface. A dam was erected near Gray's slope to supply an air compressor with water.

At No. 2 shaft, a hospital of fireproof construction was built near the foot of the shaft. Installed a 6-stage 2000-gallon centrifugal pump.

Outside: At Clifford Shaft, completed a frame building, covered on the outside with sheet iron, and installed a 20-foot ventilating fan and fan engine to take the place of building and equipment destroyed by fire during the early part of the year.

Laid an 8-inch steam line from Forest City boiler rooms to Clifford, a distance of 4,000 feet, for the purpose of doing away with Clifford boiler plant.

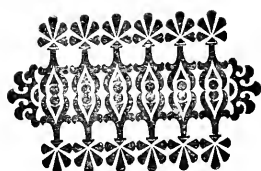
A shaft 10 feet by 10 feet and 105 feet deep was sunk from the surface to the Dunmore vein, for a second opening and air shaft.

LACKAWANNA COAL COMPANY, LIMITED

Lackawanna Colliery.—Completed a 7 by 14 foot rock plane, on a 15 degree pitch, from Clark vein to Dunmore vein, a distance of 490 feet; a 7 by 10 foot airway from Clark vein to New County vein, on a 45 degree pitch, 165 feet in length. The tunnel from the surface to the Dunmore vein, above the mountain fault, which was abandoned several years ago, has been reopened for the purpose of mining the coal on the Delaware and Hudson Stevens farm tract, above the mountain fault.

Installed two 250 H. P. Maxim boilers, and an additional 220 inch fan blower, also a 16 by 10 by 18 inch duplex boiler feed pump.

The old boiler house has been torn down, and a fireproof building of steel frame, with asbestos protected corrugated steel roof and siding, has been erected in its place.



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